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ABSTRACT

Through a set of five detailed case studies of individuals representing the new conditions of un/employment, a research project generated new information and knowledge about effective communication skills, often referred to as generic and transferable, for people engaged in so-called new ways of working. These three research questions were addressed: What communicative skills did respondents report? Is there evidence the identified skills are generic and transfer? and What is the explanation for generic and transferable skills? A literature review produced a general profile of views about literacy and numeracy; an overview of research on generic skills to set the scene for one on the research of transfer of training; and a review of what it might mean to talk about non-standard work. The case studies were selected according to the criteria of non-standard workers, including casualization and out-sourcing, telecommuting, multiple jobs in which the employee is engaged, nature and frequency of non-work, and the phenomenon of portfolio work. Findings were that basic skills are not transferred but re-contextualized by new forms of situated learning; the terms "generic" and "transfer" are wrong and misleading; speaking and personal presentation skills are the leading communicative practices; successful communication is driven by the need and purpose of the learning; practice (in context) makes perfect; and the main game is good practice in learning. (Appendixes include 106 references and an interview schedule.) (YLB)

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Non/working lives:

Implications of 'non-standard work practices' for literacy and numeracy

Ian Falk

Pat Millar

Literature review on generic and transferable skills largely contributed by

Christine Owen

An investigation by the Tasmanian Centre

Adult Literacy and Numeracy Australian Research Consortium (ALNARC)

University of Tasmania

ALNARC National Research Program 2001-2002

June 2002

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Acronyms

ABC ..... Australian Broadcasting Corporation

ABS ..... Australian Bureau of Statistics

ALNARC ..... Adult Literacy and Numeracy Australian Research Consortium

ANTA ..... Australian National Training Authority

DEET ..... Department of Employment Education and Training

DETYA ..... (Commonwealth) Department of Education, Training and Youth Affairs

ESL ..... English as a Second Language

GST ..... Goods and Services Tax

IALS ..... International Adult Literacy Survey

IT ..... Information Technology

NCVER ..... National Centre for Vocational Education Research

NCVQ ..... National Council for Vocational Qualifications

NSTF ..... National Skills Taskforce

NSW ..... New South Wales

NZ ..... New Zealand

OECD ..... Organisation for Economic Co-operation and Development

SCANS (U. S. Department of Labor)
Secretary's Commission on Achieving Necessary Skills

SES ..... State Emergency Service

TAFE ..... Technical and Further Education

TFGA ..... Tasmanian Farmers and Graziers Association

UK ..... United Kingdom

USA ..... United States of America

VET ..... Vocational Education and Training

Executive Summary

The research report of which this is a summary analyses a set of five detailed case studies of individuals representing the new conditions of un/employment. The purpose of the cases is to explain, expand, clarify and develop meanings and theory about the issue of effective communicative practices in new times. The five cases were selected according to the criteria of 'non-standard workers', namely: casualisation and out-sourcing, telecommuting, multiple jobs in which the employee is engaged, the nature and frequency of non-work, and the phenomenon of 'portfolio work'. Because only five people have been involved in this study no attempt can be made to generalise from these five cases.

The study provides the research base for understanding in what ways practice and policy might respond to the 'new basics' of literacy and numeracy skills in so-called non-standard un/employment practices. The implications of non-standard working practices for literacy and numeracy policy and practice are suggested.

The six findings of the study are:

1. 'Basic skills' are not transferred but re-contextualised by new forms of situated learning;
2. The terms 'generic' and 'transfer' are wrong and misleading;
3. Speaking and 'personal presentation' skills are the leading communicative practices;
4. Successful communication is driven by the need and purpose of the learning;
5. Practice (in context) makes perfect;
6. The main game is good practice in learning.

Effective communicative interaction is not found to be the product of just a single skill or just one piece of knowledge. Effective communication is found to be the effective integration of knowledge, skills and identity resources *as they apply to the purpose in hand.* This suggests that the focus for policy and practice should be more on effective *learning*. The steps in an effective and needs-based learning process are suggested in the conclusion of the report.

Part 1: Background and approach

Through a set of five detailed case studies of individuals representing the new conditions of un/employment, the research project sets out to generate new information and knowledge about effective communication skills, often referred to as 'generic' and 'transferable', for people who are engaged in so-called new ways of working.

Communication skills are taken in this study to include the integration of the full range of literacy and numeracy practices in routine life and work tasks that are encompassed by accepted definitions (e.g., DEET 1991). These practices include reading, writing, speaking, listening and numeracy. The study asks what the nature of these 'generic' skills is in the 'new types of work' practices, and examines how transfer of these skills to the different 'working lives' of each person actually occurs. Given the discussions—and arguments—in the media about the growing divide between the rich and the poor, a crucial aspect of the study is to ensure that both unemployment as well as employment are considered in this 'new world of work', since it is now established that entrenched unemployment is now part of the Western socio-cultural fabric.

The implications of non-standard working practices for literacy and numeracy policy and practice are suggested as part of the planned output for the study, which is to generate greater understanding of how practice and policy might respond to the 'new basics' of literacy and numeracy skills in so-called non-standard work (generic/transferable and specific/contextualised alike) practices.

Problem and questions for study

The problem for the study is to clarify the nature and transfer of 'key competencies' (Finn 1991; Mayer 1992), or 'generic skills' in supposed new forms and ways of being employed and unemployed. The generally understood literacy and numeracy skills of reading, writing, speaking, listening and calculating are implicated in all Mayer's (1992) key competencies. Not one of them can exist in any functional manner without proficiency in the literate and numerate capabilities that enable the other stated 'generic' skills. However, two of the Mayer key competencies are more closely aligned with explicit literacy and numeracy capabilities—number 2, "Communicating ideas and information", and number 5, "Using mathematical ideas and techniques".

However, readers should note that there are literacy and numeracy skills embedded in all other key competencies. One key competency is chosen as an example: "Collecting, analysing and organising information". The descriptor is:

> The capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods to obtain it.

The literacy and numeracy capabilities embedded (required in order to carry out the stated function) here are:

To locate: 'Information' is only found in verbal or textual form in written or numerical symbols. In order to locate information, reading is therefore definitely required, speaking and listening may well be, and writing may be involved in documenting or noting information.

Sift and sort: Once again, 'information' is locked in the code of language symbols, and only reading will unlock that information and make it available for the purpose in hand.

Present it in a useful way: Presentation can only occur in three ways: by a written report (be that computer-derived or graphics-based), by speaking (with written notes, outline or paper to support the talk), or by a combination of these. All options involve an integration of reading, writing, speaking and listening.

Evaluate...the information...and the sources and methods: Once more, the 'information', the 'sources' and 'methods' are all coded in the written word, in documents, library files, archives and so on.

The preceding analysis of one key competency may appear unnecessary to many readers. However, its importance lies in the demonstration that, even at the simple level of categorical integrity of each of the key competencies, the schema of Finn and Mayer falls short of real-life explanatory capacity. Moreover, the short analysis has shown that at no point would 'basic skills' have achieved the goals of each key competency, in that rudimentary sight word and phonic skills, often the commonly perceived but always contested understanding of 'basic skills', would not be sufficient in itself for the purpose.

The problem of contested meanings presents the study with additional challenges. There are many other contested terms and concepts underlying the study. One of these is the very term 'non-standard work'. Do the various attributes of non-standard work, such as increasing out-sourcing and part-time work, telecommuting and trends towards greater numbers of small and micro business, *really* constitute a new phenomenon that can be called 'non-standard work'? How long and how deep into Western countries' employment profiles *were* 'standard work' practices, if it is accepted that this means full-time, 9-5 jobs?

For literacy and numeracy, of course, the implications of this point lie in the type of literacies and numeracies required for supposed new forms of work, compared with the 'learn it in school, use it for life' stereotype of education and work during the 1900s. If it is accepted that ways of non/work have indeed changed so as to demand more 'learning on-demand', 'learning just-in-time' and so on, then what should literacy and numeracy education for these types of conditions look like?

There are, however, other problematic terms in the socio-economic field, each with their own implications for the nature of the required literacy and numeracy, factors related to the provision of literacy and numeracy, and of course the vital question of contemporary policy and strategies that would match and support 'new literacies and numeracies'. These terms include 'knowledge workers', 'knowledge economy', 'Information/Digital divide' and others. These are explored in greater depth in Falk and Guenther (2002), but this information is also summarised in this report for the reader's convenience.

In the education and training area, contested terms are also plentiful. Some of these, also explained in this report, are 'key competencies', 'generic skills' and 'transfer of learning'.

It will be apparent to the reader that there are many unknown elements that underlie a full understanding of what it might mean to be literate and numerate in the changed socio-economic times that are considered to beset (particularly) Western societies. For this reason, the most appropriate methodology equipped to deal with this situation is one which seeks to build information, knowledge and theory, since a standard 'science-based' research methodology would find it difficult to find a single testable statement or hypothesis. That is, a theory-building methodology (Falk 1998) will assist clarify the terms and issues involved, in readiness for a more generaliseable 'theory-testing' methodology that can take up different aspects of the present project outcomes.

The three specific research questions that are addressed through the theory-building research are:

1. What are the communicative skills reported by the respondents?
2. Is there evidence that the identified skills are 'generic' and do transfer?
3. What is the explanation for 'generic' and 'transferable' skills?

The structure of this report is in three parts. The first part sets out the general description of the project, the informing background literature and its conduct. Part two contains the five cases of people engaged in the 'new world' of non/work. The third and final part provides a synthesis of the research findings, and answers explicitly the three research questions.

About literacy, numeracy, 'generic skills' 'transfer of learning', 'non-standard employment 'and the 'knowledge economy'

This section will provide a summary and explanation of research that is synthesised in detail in Falk and Guenther (2002). It begins with a general profile of views about literacy and numeracy. It then overviews the research on generic skills in order to set the scene for a section on the research about transfer of learning. Finally, in a review of what it might mean to talk about 'non-standard work', the section draws to a close with a short summary.

Literacy and numeracy: the state of play

Through the socio-cultural values placed on the written word, proficiency in literacy and numeracy practices (e.g., Barton 1994;Baynham 1995) is considered fundamental for all age groups in contemporary Western society. In a society that places such a high premium for all its citizens on 'being literate' and 'being numerate', the impacts on individual adult lives are pervasive. Even adults who are considered 'highly literate' are reported to feel 'illiterate' when faced with new literate or numerate practices, a sensation familiar to many who have used new computer software packages, written email messages or used automatic teller machines for the first time.

What does 'being literate' mean?

'Being literate' transparently involves much more than the basic skills associated with being able to read, write and calculate. Because effective learning, training and communication all involve 'literacy' and 'numeracy', they too came on to the agenda of corporate ambitions (O'Connor 1994; Hull 1997)—the inclusion of language, literacy and numeracy industry competencies in national Training Packages has been ANTA policy since 1995 (ANTA 1994, 1998). This followed the decision that relevant underpinning skills and knowledge and core industry competencies be incorporated into competency standards (Australian Committee for Training Curriculum 1993; Fitzpatrick & Roberts 1997).

Almost like meat in the sandwich, discourses about literacy and numeracy have therefore been caught up in the highly competitive global and globalised economic conversations that have ensued. A country's 'literacy levels' are now widely reported—accurately or inaccurately as causally connected—to that country's industry productivity and the national economic status.

There is a seeming tension between the desire to return to the values of the 'old basics' with the so-called 3R's and a recognition that the social structure of developed countries in the world is in a process of transition from an 'old economy' built around manufacturing, to one built on highly skilled service industries that have been often described in terms of a 'knowledge economy' (OECD 2000).

> Knowledge and information is being produced today like cars and steel were produced a hundred years ago. Those, like Bill Gates, who know how to produce knowledge and

> information better than others reap the rewards, just as those who knew how to produce cars and steel a hundred years ago became the magnates of that era. (Stiglitz 1999)

The significance of the changing demands of the social environment in which young people are growing up in, is recognised in *Literate Futures* (Queensland Government 2000). While the focus of this report is on strategic planning for school based literacy programs, it is significant that the report acknowledges the inadequacy of basic literacy skills, which were thought to serve Australians well 50 years ago.

> The tool kit of basic skills that served many of us well in the 1950s is inadequate today. In information-based economies and mass-media cultures, young people face a complex, potentially overwhelming and virtually limitless sea of written, spoken and multimedia texts. They have to manage themselves in environments where cultural identities, personal life pathways and emotional and spiritual lives are shaped by the texts and textures of institutions like schools, churches, community groups, businesses and corporations—through talk shows, online communications, video games, cinema and consumer designs. (p. 7)

The statement above applies equally to adults as it does children. The suggestion is that literacy then is not only about the three Rs, but also about a multiplicity of literacy and numeracy interactions in an increasingly complex social milieu.

In such volatile socio-economic conditions where 'the only thing that's here to stay is change', it is important to understand that the way literacy and numeracy has been understood is also changing. The next section overviews the four main approaches to literacy and numeracy, but it is equally important to understand that it would be very rare for one of these practices to be evident without some evidence of one or more of the others. That is, these are to be regarded as themes that are likely to be evident in practice in some mix.

Adult literacy and numeracy's theoretical heritage

The research literature associated with adult literacy and numeracy draws upon, and can be understood through, four groups of theory about literacy and numeracy (see in part Freebody et al, 1993). These are the *Basic skills and functional approach*, the *Growth and heritage approach*, the *Critical cultural approach* and the *Learning literacies through social capital approach.*

Basic skills and functional approach

This approach views reading and writing as perceptual and / or cognitive skills. There is an emphasis on how sight word recognition and phonics affect the acquisition of literacy. A body of literature has emerged which links these 'basic skills' of human capital theory with the supposed benefits of education in basic skills to industry and the economy, and thus also with vocational education and training (e.g., The World Bank 1999; Temple 2002). The most commonly understood meaning of the term 'adult literacy' is of those adults who seek assistance with the literacy skills of English as their first language. That is, the word literacy is often used in the sense of 'illiteracy'. This meaning is affected by, and in turn affects, the most commonly reported meanings of literacy used in the media. Within this framework of understanding, one such popular meaning is usually reported in terms of 'problems' associated with a 'deficit' of 'basic skills', which appears as a form of 'illiteracy' perpetuated in the back-to-basics debates of the last two decades (e.g., Luke 1988). Numeracy, similarly, is commonly interpreted as basic skills, arithmetic and computational work (Cumming 1996).

Functional literacy refers to those literacy skills required to perform certain 'functional' tasks, such as those related to managing one's domestic life, work life or public life. The example of

operating an automatic teller machine illustrates the way in which 'literacy' is seen in the above definitions to incorporate 'numeracy' and that the literacy skills required in the task are viewed as 'functional'. To operate an automatic teller machine, one first has to understand the task, its purpose and its social meaning. One needs also to understand basic technological operations. Reading words is the next obvious task involved: one cannot proceed with this functional life task without reading words such as 'Enter PIN number and press ENTER', and 'Which account do you wish to access?' The argument here is that the actual mathematical or numerical components of the operation are only a small part of the overall task, and involve entering a few digits.

Much of the skills research performed by Sticht (e.g., 1978) in the context of the USA armed services is considered to be part of 'functional literacy' (e.g., Philippi 1988), an approach made popular in the workplace literacy procedures of literacy audits. However, the literacy and numeracy required for 'functional literacy' tasks is conceived of and taught as separate 'basic skills'. That is, while it is recognised that literacy and numeracy skills are those that are integrated into real life tasks, they are abstracted from those tasks for the purpose of skills acquisition. Literacy and numeracy skills are taught as such on the assumption that they can then be applied in those functional tasks that rely on them.

However, the assumption of transferability of the literacy and numeracy skills that are integrated into tasks is not taken as given in the following topics to be discussed, which include various theories and practices of 'integrated literacy and numeracy'.

Growth and heritage approach: 'whole language', 'language experience'

The 'growth and heritage approach' focuses on the processes of literacy's acquisition as part of the 'whole' social context in which it occurs, and that comprehension should develop alongside skills (Goodman 1986; Cambourne 1988). The emphasis is not so much on the text or the product but on the relationship between comprehension, sight words, grapho-phonic cues and the context in which these are used. The primary principles of whole language (e.g., Edelsky 1991) are that learners are actively constructing meaning the whole time. The focus is on the whole texts as the primary unit of meaning rather than words or graphemes (Campbell & Green 2000, p. 130).

'Language experience' is a teaching approach based on the 'whole' experience of the learner (Bird & Falk 1977). The experiences of the learner are drawn upon before the language activity begins. These experiences form the basis for the language activities, and required sight words and phonic elements are covered in the context of the whole experience. Reading and writing activities are then related to these experiences so that they carry more meaning for the learner, and the issue of 'comprehension' is overcome.

'Whole language' is often set against 'basic skills' in media reports, but this is a false dichotomy when seen in the light of subsequent views and practitioner experience of literacy.

Critical-cultural, New Literacy Studies, Integrated literacy, Multiliteracies

Literacy is here seen as social practice and is socio-culturally situated (Gee, Hull & Lankshear 1996). This is the view of 'critical literacy' as a set of socially organised practices (Fairclough 1989; Gee 1990, 1992, 1999; Hammond et al. 1992; Lankshear & McLaren 1993) in which basic skills for decoding, encoding and fluency connect to all aspects of an individual's and a community's sense of social identity and capacity. The purpose of literacy in this case is to gain command over social resources (Fairclough 1989, 1992; Gee, 1999), sometimes referred to as 'empowerment' (Freire 1985).

Because of the dynamic natures of language and society, people continually have to embrace new and specific practices, which in turn form a specific literacy (Lankshear et al. 1997). In fact, the multiplicity of literacies for different purposes in different contexts has come to be known under the heading of 'multiliteracies' (The New London Group 1996; Cope and Kalantzis 2000). Once again, perceptions of numeracy parallel those of literacy. Varying numeracy skills are required to deal 'systematically [with] problems of concern in everyday life and [to] better understand the physical, economic and social environment in which we live' (Crowther 1959, quoted in Cumming 1996, p. 11). Literacy and numeracy, therefore, both have social, political and educational implications. They are often seen to be involved with power and control of social resources (Searle 1999) of one group or individual in society over another. It is the important place of literacy and numeracy in this control over social resources that leads to a consideration of literacy, numeracy and VET in connection with that social resource known as social capital.

Like multiliteracies and critical literacy, *New Literacy Studies* argues that literate practices (Gee 1990; The New London Group 1996; Barton & Hamilton 1998) are embedded in different social practices, and that these practices represent a multiple concept of literacy, or in fact 'literacies'. It makes more sense then, that the learning of 'literacy' is instead treated as learning multiple literacies or multiliteracies.

Literacy and numeracy skills are here viewed as the capacity to perform the literacy and numeracy components that are a part of and integrated into the existing and expected tasks with which people are confronted in all aspects of their daily lives. Literacy is seen to be embedded in the social context (Baynham 1995) and there is a diversity of literacies in society (Hamilton, Barton & Ivanic 1994).

The literacy and numeracy practices required are both at a basic level and those required for more complex tasks. The first systemic recognition of integrated literacy and numeracy occurred with the 1993–1994 Australian Language and Literacy Policy project, undertaken by the Foundation Studies Training Division of the NSW TAFE Commission, titled *Integrating English Language, Literacy and Numeracy into Vocational Education and Training: A Framework* (Courtenay & Mawer 1995).

The intersection of literacy and numeracy in the vocational education and training (VET) sector was supported by the Australian National Training Authority throughout the 1990s. The integration of language, literacy and numeracy competencies in national Training Packages has been ANTA policy since 1995, following the decision that relevant underpinning literacy and numeracy skills and knowledge would be embedded in the core competencies specific to each industry sector (Fitzpatrick & Roberts 1997). Issues of literacy and numeracy in the implementation of training packages were a primary focus for the 2000 ALNARC research program (Haines & Bickmore-Brand 2000; Kelly & Searle 2000; McGuirk 2000; Millar & Falk 2000; Sanguinetti 2000; Trenerry 2000).

Learning literacies through social capital approach

This stresses the importance of learning as the development of social capital resources (Castleton & McDonald 2001; Falk 2001a, 2001b, 2001c). These resources are the appropriate networks, trust and common values to the task in hand. The development of the learner's social capital resources of role-related networks, trust and common values is made explicit in this theory of learning.

It is through the learning of social capital resources that the four roles identified by Freebody and Luke (1990) are adopted: that of Code breaker, Text participant, Text user and Text

analyst. Social capital makes the connection to the wider society's socio-economic framework in a way that is not made in the other theoretical strands. The research literature reports that there is now a wide recognition that a purely economic strategy is insufficient (e.g., Saul 1996; Rifkin 1999) for socio-economic well being. Western society along with its educational and training systems is currently promoting the idea of lifelong learning, with the associated concepts of a learning society (Young 1995) and learning communities (Alheit & Kammler 1998; Holford, Jarvis & Griffin 1998; Falk 1999). Effective engagement with these concepts requires that traditional forms of education and training be combined with social capital (Putnam 1993; Schuller 1996; Schuller & Field, 1998).

The *Learning literacies through social capital approach* also provides a functional explanation of the 'generic skills' and 'transfer of learning' issues, to follow in the next sections. Askov and Aderman (1991) note how Sticht's (1987) research demonstrated that ' ... general literacy skills instruction ... does not translate well to job-related basic skills needed for job performance' (Askov & Aderman 1991, p. 17). That is, generic skills do not do seem to be generic! Sticht's work on the lack of transfer of the acquire generic literacy skills has been supported by Mikulecky (1988), who concludes that 'Even though it is possible to note similarities across occupational and school settings, researchers have found transfer on the part of learners to be severely limited' (p. 25). However, Falk (2001a) finds that purposeful and appropriate networks provide the vehicle for transferring generic literacy learning to other life settings, in this case employment. In addition, Falk (2001b) shows how 'generic' trust in self and trust in the tutor provides the first step in transfer of informal generic learning acquired elsewhere to other formal learning processes.

The next section focuses in on the vexed question of 'key competencies', 'generic competencies', 'key skills' (UK) or 'generic skills'.

'Generic' skills and 'transfer' of learning

This section of the report draws together ideas and themes from the generic skills literature. The literature for this section has been drawn from a variety of sources and largely includes research and theoretical papers that have been published within the past five years, though reference is made also to earlier works. Following the summary of the context of the emergence of a call for generic skills, the review will commence with an outline of some of the conceptual confusion that surrounds how the term has been defined. It will be concluded that no consensus can be reached about what the term means and that the definition that many authors settle on is so broad it is of little conceptual value. Nevertheless, there is a plethora of literature that cites:

- The need for generic skills according to what employers want;
- What elements should be included in lists of generic skills, and
- If generic skills are included in curricula, how they can be transferred from the educational environment to the workplace.

The rest of the literature review is structured around these key themes.

Context for the generic skills debate

Cornford (2001) points out the concept of generic skills and learning is not new. He traces the emphasis on generic skills back to the 1950s and notes that it was also supported by the humanistic thinking and approaches which characterised lifelong learning in the 1970s. These

included the acknowledgement that there was a need to teach generic learning to learn skills rather than simply technical content knowledge.

Within Australia, acknowledgement of the importance of developing generic skills was also mentioned in the mid-1980s (Karpin 1985) and the work being undertaken in Australia follows similar moves that were also occurring in other countries such as in the UK, New Zealand and in the USA, and discussed in the next section. In all cases the impetus driving the generic skills movement was the perceived failure of the education system to be meeting the emergent needs of a new economy and the needs of employers.

Mayer (1992) was given the brief of investigating the expression of generic skills in response to proposals put forward to the Finn (1991) Committee who examined the needs of young people in an environment of high unemployment. Most authors agree (e.g., Misko 1999; Moy 1999; Down 2001; Kearns 2001) that the main impetus behind developing notions of generic skills was economic, that is, that generic skills were seen as what employers were wanting to ensure graduates were employable and job ready.

However, where and how young people acquired these skills was also an important part of the Government's agenda, and the Mayer Committee emphasised the importance of the development of the key competencies for all young people, 'regardless of the education or training pathway they follow' (Mayer 1992, p. 1). In this respect, it is interesting to note that the idea of key generic skills was also seen as a bridge between general and vocational education (Mayer 1992, p. 6).

Definitional dilemmas: A conceptual conundrum

There are problems that emerge from the literature in the way generic skills have been defined and in the way they are recommended to be taught (Cornford 2001, p. 145). In undertaking a review of the literature on generic skills for the new economy Kearns concludes:

> There is no consensus in the international literature on the identification of the essential generic skills (Kearns 2001, p. 41).

Kearns goes on to offer the following as a workable definition. The term *generic skill* is generally understood to mean 'those transferable skills, essential for employability, which are relevant at different levels from most' (Kearns 2001, p. 1). The term *key competencies* is defined as 'competencies essential for effective participation in the emerging patterns of work and work organisation' (Kearns 2001, p. 12). However, some authors have also referred to the notion of generic skills as meaning 'skills or attributes that transcend traditional subject boundaries and are thus cross-curricula' (Bryce 1998, p. 2).

A basic problem, according to Reid and Parker (2002), is the lack of an adequate theoretical conceptualisation of generic skills. They ask the question: Are they synonymous with workplace competencies, as some lists assume, or are they more foundational? According to these authors the term 'generic skills' can range from the over-particular (e.g., the ability to use a certain kind of technology), to the over-general (e.g., mental flexibility). They propose that 'generic skills' are what are required to deal capably with the nexus between cognition and communication' (Reid & Parker 2002, p. 2).

In a paper examining the disparities in perceptions of generic skills, Leveson (2000) concludes that the term 'generic' is an appropriate word to use when the intention is to describe a generality. However, she points out that unless the exact meanings are made explicit the term itself may be too general to enable the skills mentioned within it to be identified. Leveson

(2000) suggests four possible interpretations of the term 'generic', all drawn from the work of Marginson (1993). Marginson first asks:

> Does general or generic mean *universal,* so that the whole of each of the occupation's specific competencies is contained within the generic competencies (say problem-solving)? Are generic competencies sufficient as well as necessary to all the specific competencies? (Marginson 1993, in Leveson 2000 p. 159)

In this case, does having a skill in problem-solving mean that the individual would be applying those same skills of problem-solving in one occupation compared to another occupation? A second possible interpretation of 'generic' is also offered by Marginson, who asks:

> ... could general/generic mean *essential*, so that the more fundamental aspects of each particular competency are expressed at the generic level? (Marginson 1993, in Leveson 2000 p. 159)

According to Leveson (2000) this implies a set of more specific competencies which are considered essential to that particular generic class. It would therefore be incumbent, she goes on, to those devising the competencies to state expressly as a generic skill every element of that skill which is considered essential. Therefore each skill component that implied communication, for example written skills and verbal skills, could not be omitted if an employer were referring to communication in these aspects.

A third possible interpretation of the word 'generic' can be found in how these generic competencies are recognised. Marginson asks:

> Does general/generic more modestly refer to those aspects of competence (say, communication) that are *common* to each specific competency, so it refers to one part of each of the particular? If so, are such generic competencies recognizably the same in the context of different jobs? Can we disentangle the common element from each of the particular requirements in order to find out? (Marginson 1993, in Leveson 2000 p. 160)

The implication here is whether it would be enough to teach the common element of any particular skill on the assumption that acquisition of the 'common' will guarantee that this skill can be demonstrated in any situation. Leveson (2000) argues that this could be the case in the *standards* to which the generic skill is to be taught where, for example, aspects of communication skills may be inferred as being part of many of the specific competencies. So for example, problem-solving or constructing an argument would be regarded as requiring communication skills as well as the other competencies that may be listed in the standards.

The fourth and final interpretation possibility offered by Marginson includes the following:

> Is the general separated from the particular so that general/generic refers to a different type of competency that is separate from the occupation-specific competencies (such as flexibility or learning how to learn)? (Marginson 1993, in Leveson 2000 p. 160)

For Leveson (2000) this question raises the possibility that there are hierarchies within conceptualising the generic competencies. For example, would the use of the generic term 'flexibility' imply an overarching set of skills which stand separately and above the other nominated categories?

Marginson sums up the conceptual confusion in concluding that:

> In practice the term 'generic competency' can take any one of these meanings and discussion often slides from one meaning to another unrecognized, or takes more than one of these meanings at any one time ... it is a brave person (or committee) that is

> certain about the classification, generic competence. By their nature such systems of competencies are bound to be arbitrary, unstable and contentious (Marginson 1993, in Leveson 2000 p.160)

It is not surprising then that the literature reviews of generic skills such as that developed by Kearns (2001) conclude that there is no consensus in using the term and offers such a broad definition (as discussed earlier) that could be applied to almost anything. However, despite the conceptual confusion and definitional dilemmas highlighted in the literature as discussed in the previous section, a plethora of literature continues to make reference to (a) employers' demand for generic skills; and (b) how these skills are transferred from the university/VET environment to the workplace.

In reviewing this literature two broad themes can be identified. The first theme includes a body of literature where the notion of generic competence or generic skills is presented as an answer or solution, that is, to the arguably growing gulf between education systems and what employers want. These studies typically provide lists of skills that employers state they need which may or may not be an expansion of the competencies identified by Mayer (1992). Some of these elements will be discussed at some length in the next section.

The second theme found within the literature focuses on the issue of transfer. These studies focus on the acquisition of generic skills within particular education or training programs and are interested in either (a) whether these generic skills are present within educational programs (Moy 1999; Dawe 2001; Down 2001); or (b) what the implications are for training to ensure the transfer of these skills from education to the workplace (Misko 1999; Moy 1999; Cornford 2001).

Generic skills and employer expectations

A number of studies (Velde 1997; Gow & McDonald 2000; Dumbrell, deMonfort & Finnegan 2002) have examined the changing nature of work and in particular the alleged increased cognitive demands placed on workers as a result of the knowledge economy. For example Dumbrell, de Monfort and Finnegan (2002) examined the changing nature of work within the petroleum industry and concluded that there was significant job redesign and increased competition within the 17 firms surveyed. These authors concluded that there were two important consequences as a result of changes in job design. The first was that supervisors were no longer easily accessible to solve day-to-day operational problems and the second was that the removal of a layer of management and multi-skilling had led to the introduction of work teams and thus the need for greater skills in communication and team-working. Technology was also cited as having implications for the way the work had changed. The authors concluded that generic skills or competencies within this industry were more likely to become important in the future.

In another study Velde (1997) surveyed 52 administrators and clerical administrative personnel drawn from the Australian Council of Private Education and Training Providers. The aim of Velde's study was to determine the nature of recruitment and selection practice, in particular the types of competency information employers wanted to know about applicants when making decisions. According to Velde (1997), in addition to work experience and technical skills, other competencies cited by employers were the possession of generic skills which included being innovative, adaptable, flexible, a team player, and having good organisation skills, numeracy, accuracy and accounting skills.

A similar study was conducted by Gow and McDonald (2000) though this study focused on the professionals involved with educating and employing graduates from schools, vocational

colleges and universities. Gow and McDonald (2000) distributed 590 questionnaires to a range of post-compulsory educational institutes and employers identified through the Australian Human Resources Institute. Their study provided support from three new areas of generic competence which included adaptability to changing work environments, accountability and business management skills. The recognition of an emerging set of new generic skills was also supported by Kearns (2001) in his review of the literature on the topic. Kearns quotes the NSTF (2000) which concluded, in Britain:

> That while employers needed not only specific vocational skills and the softer and transferable employability skills, they also require a workforce with, "The capacity for creativity, initiative and continuing learning and development for the newer and flexible forms of work organization which will be tomorrow's norm" (NSTF 2000, p. 13 in Kearns 2001, p. 42).

What comprises generic skills in the literature?

A comparison of the key skills identified in Australia, Britain, the United States and New Zealand is presented in *Table 1*.

Key Competencies	UK (NCVQ) Core Skills	US (SCANS) Workplace know-how	NZ Essential Skills
Collecting, analysing and organising information	Communication	Information Foundation skills: Basic skills	Information skills
Communicating ideas and information	Communication Personal skills: Improving own learning and performance	Information Foundation skills: Basic skills	Communication skills
Planning and organising activities	Personal skills: Improving own learning and performance	Resources Foundation skills: Personal qualities	Self-management skills Work and study skills
Working with others and in teams	Personal skills: Working with others	Interpersonal skills	Social skills Work and study skills
Using mathematical ideas and techniques	Numeracy: Application of number	Foundation skills: Basic skills	Numeracy skills
Solving problems	Problem solving	Foundation skills: Thinking skills	Problem-solving and decision-making skills
Using technology	Information technology	Technology systems	Information skills Communication skills
	Modern foreign language		

Note: Where the UK core skills, US workplace know-how and NZ essential skills are comparable with more than one key competency they have been repeated. Source: Kearns, 2001, p. 15

Table 1. Comparison of Key Skills in Australia, Britain, United States and New Zealand

In addition to these key skills more recent research has added to the list, as discussed previously, which now includes other aspects identified by some authors (e.g., Gow & McDonald 2000), such as:

- The adaptability to changing work environments;
- Accountability and business management skills;
- Virtual attributes.

Kearns (2001) also notes that the push for a broader set of essential generic skills beyond Mayer's key competencies was reflected in Australia in a recent survey of 350 firms undertaken by the Allen Group (2000). The generic skills identified in addition to the Mayer key competencies included:

- Basic skills - literacy, numeracy;
- Understanding of system relationships;
- Customer focus;
- Personal attributes;
- Capacity to learn;
- Willingness to embrace change;
- Practicality; and
- A business orientation.

Before moving off what are the elements of generic skills found in the literature one final list will be included because of its pertinence to this study. Jennifer Bryce (1998) of the Australian Council for Education Research has undertaken to map generic skills from the perspective of schools, employer groups and tertiary institutions. In that paper and drawing on her own literature review, she summarises the frequently expressed personal and interpersonal generic skills which includes ten items listed in *Table 2*. Bryce then used these ten generic skills as a means of mapping data collected by researchers interviewing major employers. One of the research studies Bryce quotes was that undertaken by Stanton (1995, in Bryce 1998).

Stanton asked major employers (BHP, BP, NRMA, BTR-Nylex and Australian Newsprint Mills, The Regent, Milburn and David Jones Victoria) to identify the competencies or attributes that they look for when recruiting staff from outside the organisation at entry-level positions. Table 2 summarises the data collected by Stanton and maps that data against the ten generic skills identified in Bryce's literature review. While Bryce uses the data to conclude that it supports the idea that personal and interpersonal generic skills are important to the employers of school leavers, of more interest in this study are the three generic skills that, according to Bryce's interpretation of Stanton's work, were not highlighted in the responses offered by employers. These include self-management, self-evaluation/reflection about self, and socio-cultural understanding (see *Table 2*).

Personal/Interpersonal generic skill	Stanton questionnaire response
Ability to work independently	'motivated self starter, initiative, flexible, independence, drive'
	'self starter'
Self-management	
Work collaboratively/co-operatively	'able to work with others and in teams'
	'team player'
	'ability to work in teams'
Adaptability/flexibility	'initiative, adaptability, flexibility'
	'ability to embrace change'
	'ability to multi-skill'
Self-evaluation/reflection about self	
Communication	'communication skills'
	'verbal communication skills'
	'above average oral communication skills'
Problem solving/reasoning	'ability to think broadly'
	'problem solving ability'
	'lateral thinking'
Valuing learning/life-long learning	'ability to want to learn'
	'thirst for expanding knowledge and skills'
Self-confidence/self-esteem	'hire the smile and attitude and train the rest'
Socio-cultural understanding	
Suggestions of more general personal skills	'interpersonal skills'
	'reliability, integrity, honesty'
	'we believe you can train skills and knowledge, not attitude'
	'maturity'
	'common sense'

Table 2. Alignment of generic skills elicited by Stanton's study with the ten personal and interpersonal generic skills identified by literature review

These skills are of interest in this review because they are the very skills highlighted by Owen and Bound (2001) that non-standard workers would need. Owen and Bound (2001) investigated the knowledge, skills and attitudes that contractors who were responsible for their own working arrangements would need when they worked with others in loosely formed strategic alliances. In that study workers responsible for finding their own work needed (in addition to the 'usual suspects' listed in Table 1) highly developed self-management skills as well as the capacity to critically reflect on their performance. These skills were particularly important since such feedback was typically not available to contract workers in the same way

it is to standard employees operating within performance management agreements. The workers also needed to carefully read group and organisational cultures to discern the values and sometimes implicit meanings that were necessary in order to manage relationships that were important to both the existing contract work and ongoing work possibilities.

This section has described a major theme within the literature where generic skills or competencies are identified as an answer or solution to the question of what do employers want, and that research is typically contextualised in terms of the growing demands of the knowledge economy and changing nature of work.

Within this body of literature a number of lists can be found describing the various generic competencies. The key competencies identified by Mayer seem to be quite resilient and are repeatedly referred to. However, some authors are now adding new competencies which they perceive are emerging as necessary in the future of work.

The embeddedness of generic skills within education and training

The second main theme identified within the literature focused on the ways in which generic skills are present in existing curriculum documents and how they might be best taught and transferred. It is interesting to note that whereas many of the studies undertaken within the first theme occurred within the university sector, almost without exception the studies that addressed this particular theme were found focusing on the vocational education and training sector.

A number of these studies (e.g., Searle 1996; Misko 1999; Moy 1999; Hager, Crowley et al. 2000, Dawe 2001) have focused on the issue of transferability. These studies have as their focus to investigate the extent to which generic competencies within vocational education are bound to specific contexts or can be transferred. Since this issue is at the heart of the generic skills debate it will be discussed at some length here. However, it should be noted that a full review of the literature on transfer is beyond the scope of this paper.

At the heart of the problem that this set of literature is attempting to address is the idea that although the term 'generic' implies transferability (as was included in the definitions described earlier), it does not guarantee it. Indeed the issue of transferability is closely intertwined with how the term 'generic' can be both conceptualised and defined. This is because as Marginson (1993) concluded the more specifically skills are defined the less their transferability can be taken for granted.

In a review of research into the impact of generic competencies on workplace performance Moy (1999) concluded that there were a variety of key competency projects that could be identified as having successfully integrated key competencies within training curriculum. Moy makes reference to a number of studies where the integration of five key competencies is in evidence in problem-based learning within a college of hotel management. Down et al. (1997) cited in Moy (1999) provide another example of nine case studies which focus on the use of key competencies in work management approaches.

However, not all researchers would support this view. Searle (1996) for example, investigated the workplace skills and knowledge required by small business owner/operators in the tourism and hospitality field. Her aim was to determine the extent to which generic competencies within work were bound to specific contexts. She concluded that success in communication within the hospitality context depended on the ability of front office staff to make predictions or inferences based on the underlying rules of the workplace. She goes on to note that there is an assumption within VET programs that students possess certain generic language and

literacy skills, however, no attempt is made to identify what might constitute appropriate skills within this particular context. While this is an important insight, it is also problematic. The problem with this conclusion is the one that was reached earlier in terms of levels of specificity and of generality. The more specifically defined the competence may be, the less likely, it would seem, to be able to be transferred across contexts, yet this is in fact what generic competencies are supposed to be all about.

Falk and Smith (2001) conclude of the relationship between 'generic' competencies and contextual factors that:

> ...it can be said with confidence that certain components ... are 'generic' to the extent that they are perceived to be generally applicable across different situations.... However, on close examination of the evidence available from this study, these 'generic skills' are found to be transferable only in situations where the contextual factors ... are known and acted upon. That is, in over-simplified terms, it is found that generic skills are only as useful and transferable as contextual knowledge permits.

This question is taken up by Beven (1996) who synthesised the research studies undertaken by Searle and colleagues (Stevenson 1996). The purpose of those studies was to examine the workplace knowledge used by operators in the small business, tourism-hospitality field, and to explore the distinction between generic and context-dependent knowledge. In terms of the inconsistency of findings especially in relation to other studies Beven (1996) concluded that these studies do not suggest that attempting to teach generic skills is a futile act, but rather that they argue that generic skills may be impossible to apply if the user lacks *domain specific knowledge*. Therefore according to Beven (1996) attempting to teach only generic knowledge might, in fact, be nonproductive.

According to Beven (1996) this means that considerations about the generic nature of knowledge need to be conceptualised at different levels of abstraction. However, according to the studies reported in Stevenson (1996) knowledge is meaningful only as site-specific competencies which are operationalised by workers to make sense of the local context. As Moy (1999) points out, transferability is both a contentious and complex issue that requires future research. According to both Misko (1999) and Moy (1999) the strategies used by educators in teaching for transfer needed to be included within this research agenda.

This issue was taken up by Hager, Crowley et al. (2000) when they investigated generic competencies and their applications within the construction industry. In their interviews with construction workers it was commonly perceived by those interviewed that people with good soft skills (meaning communication and teamwork skills) were either born with them or not. However, as these authors went on to conclude this is not the full story and they reported many instances where workers had been able to improve and refine these soft skills with experience and practice. Hager, Crowley et al. (2000) concluded that if training is to encourage the development of these generic skills it needs to be more interactive and linked to the particular (that is, to particular building and construction sites). According to these authors this means a reduced role for classroom based training and new roles for trainers and instructors. Greater attention needs to be given, they suggested, to onsite mentors and coaches.

The question of whether generic competencies have been sufficiently integrated into training packages and are being appropriately taught such that these skills are transferred continues to be problematic in the literature. According to Dawe (2001) the focus on generic skills in training packages has been enhanced though needs to be continually monitored. Dawe (2001) investigated the ways in which Mayer key competencies and other generic skills have been incorporated into national training packages.

According to Dawe's review of a number of training packages (which included training packages from business, agriculture, community services, construction, entertainment, hospitality, information technology, metal and engineering, and retail) although generic skills were present within the training packages they needed to be made more explicit in the evidence guide for each unit of competency. Whether these skills were then transferred to the workplace was felt to be much more difficult if those generic skills are not taught in the context of the required technical skills. Dawe's study also drew attention to the need for teachers to devise appropriate learning strategies to promote generic skills as essential components of any job.

This literature review has identified that there are difficulties with how generic skills have been defined that lead to conceptual confusions with the term. The review also identified two broad themes within the literature citing generic skills. The first is a body of work where generic skills are perceived as part of a solution to what employers want in employees. The second theme found in the literature relates to those works that focus specifically on if generic skills are taught and how they are transferred. Within both themes a sub-theme is in evidence of what actually counts as a generic skills and a variety of lists are offered. However, the Mayer committee list developed in 1992 still is most commonly cited, with other authors adding to this list as new demands from the changing nature of work emerge.

In the literature, the terms 'generic skills' and 'key competencies' are used interchangeably. No research found has teased out the differences, if there are any. It can also be said that generic means transferable in relation to the literature reviewed.

Non-standard employment and the 'knowledge economy'

In the world of the middle of last century, a vocational qualification gained immediately after leaving schooling usually lasted a lifetime. Whether it was for apprentices, teachers or medical practitioners, initial entry-level training was for school leavers, and was designed to prepare the trainee for a lifetime of work. Re-training was a rare event for the middle classes in those 'stable' times when Australia could still rely for its economic base on its primary industries, and the labour market was 'steady as she goes'. Education and training, then as now, were expected to impact on the socio-economic well-being of the nation—that is, their structural purpose under the human capital economic model, although the concept of 'well-being' has until recently been narrowly defined as 'income'.

At the same time, the concept of 'being literate'—which even then included numeracy in the idea of being educated in the three Rs—became as stable, entrenched and taken-for-granted as a highly valued cultural commodity in those industrialised times and for the prevailing societal purposes. Conversely, to be 'illiterate' was frowned upon and implied not only being deficient in the technical aspects of reading, writing and numeracy, but also being ignorant and stupid. Literacy and numeracy were and still are valued as being vital for the well-being of adult Australians.

Literacy and numeracy in a changing society

Times have changed. In a post-industrial era, possession and manipulation of 'knowledge' seems to be as prized as ownership of 'skills', so knowledge is an increasingly sought after commodity in the instantly communicating, globalised economies of new times—so much so that it is often used in the media to capture the essence of new times in the term 'knowledge economy'. However, while society has changed, many of the ways of thinking from last century persist. The last century model that said, 'learn it in school, use it for life' still

underlies much of policy, research—and indeed practice—in post-industrial countries today. The presumption that literacy and numeracy, once taught in schools as unitary, measurable entities that are stable and can be abstracted from the societal contexts in which they occur, does not match reality. Neither does the notion that, once acquired, they can be applied for the rest of life without deterioration.

It is a presumption which was, perhaps, appropriate for the industrial age – but maybe not for life and work in new times, as the International Adult Literacy Survey found (IALS 2000):

> '[T]he challenge of maintaining and improving the literacy skills of adults is an issue that is much broader than formal education. The International Adult Literacy Survey reveals that literacy skills can be lost if they are not used throughout life.' (p.1)

Confirming this, Falk and Guenther (2002) find that "7.5% of the working aged population in 2010 may have benefited from primary school initiatives commenced in 1998" (p. 19). Of course, the corollary is that *92.5% of the workforce for the year 2010 will not be able to benefit from primary school literacy and numeracy education initiatives*. There seems to be not much point, then, waiting for the 'benefits' of literacy and numeracy schooling to impact on the workforce of the future.

The direct implication of this is that education and training resourcing models weighted towards school literacy and numeracy *alone* in the expectation that this will eventually 'cure' adult illiteracy and innumeracy are fallacious. Five grounds underlie this fallacy:

1. Approximately 92.5% of the workforce for the year 2010 will not be able to benefit from primary school literacy and numeracy education initiatives;
2. Once students leave school, the contexts in which they use their skills are so different that the skills cannot easily be transferred, which is the main issue for this research to clarify;
3. Not all children acquire adequate literacy and numeracy skills while at school, and research and history demonstrates that to presume otherwise is impractical;
4. Old literacy and numeracy skills are lost if they are not used, and these old skills are increasingly not used because they are not relevant to work in the knowledge economy;
5. The existing population of adults needing literacy and numeracy skills has very little chance of accessing resources for their life's needs. There are simply not enough programs that might help them in existence.

The links between Australia's literacy and numeracy resources, embedded in the human capital of the country, still impact directly on individual and state socio-economic well-being. As Lee and Miller (2000) report:

> One of the strongest empirical regularities in the Australian labour market is the positive association between educational attainment and labour market success. In analyses that examine the average income return to years of education, each additional year of education is associated with around eight per cent additional income. (p. 1)

However, one of the problems that emerges from the research is that fewer and fewer Australians are gaining access to this qualification / income scenario, as is shown in more detail later.

Characteristics of a so-called 'knowledge economy'

Societies that have embraced the rhetoric of a 'knowledge-based economy' support their claims by reference to a number of features. Acceptance of innovation and cutting edge technology is perhaps the most commonly understood indicator of such an economy (ABS 1999b). Running alongside this popular symptom is a more targeted emphasis on investment

in human resources, particularly in terms of higher education to meet the growing demands of the society's consumers. In this view of the economy, economic output is increasingly determined by services rather than physical goods (OECD 2001). The push for innovation is to some extent driven by an increasingly competitive environment created by a global focus.

It could well be argued that the Australian economy is shifting rapidly in the direction of a knowledge based economy. Apart from the evidence of Australians' apparently insatiable demand for the latest forms of information and communication technology, the changes in the tax regime to a GST is a sure sign that services are increasingly important to the economy.

However, the conceptual basis of the term 'knowledge economy' remains highly problematic. There are critical questions that must be addressed, such as 'whose knowledge is it that is being referred to here?' What *other* kinds of knowledge contribute to socio-economic well-being apart from the rather narrow business-sector definition of knowledge usually referred to? Sound socio-economic well-being is at least as much a product of a strong 'community' (Rifkin 1999) as it is of a strong business sector. Neither does a corporate construction of knowledge account for the whole of the knowledge that counts in a society, nor would they claim such ownership. However, in terms of media and policy rhetoric, the prevailing discourse on 'knowledge' is structured in corporate terms, as a strategic plank in their capacity to respond to and manage change through, primarily, efficiencies related to their employment flexibility.

The changing nature of society is nowhere more evident than in the ways people earn their livelihoods. Whether this is through paid work, work for the dole programs or through social security payments of some kind, everyone must feed and clothe themselves. However, all people choose to do so in differing ways that are influenced as much by well-being factors such as physical and lifestyle amenities, as by income (Green 2001). The socio-economic bases of the new millennium show some notable characteristics which call into question the nature of the 'knowledge' required in the new world of un/employment.

Changing nature of employment: Non-standard work

There has been a reported sharp increase in non-standard work—casualisation, contractual, outsourcing and growth in telework in the home (Marginson 2000, p. 21–2). *Figure 1* shows the trend to casual employment, which is primarily attributable to increases in male casual employment, which increased 115% in the ten-year period to 1998 (ABS 1999a). In Australia, only 59% of the workforce is now employed as permanent employees (Hall et al 2000).

The 'portfolio worker' (Handy 1993) has emerged as a major new identity of the knowledge-based economy (Falk 2001b, p. 2). These new workers carry with them a 'portfolio' of skills which, ideally, transfer to multiple workplaces. As a consequence of these multi-skill expectations there is an increasing requirement for multiple literacies and numeracies (Barton & Hamilton 2000; Cope & Kalantzis 2000).

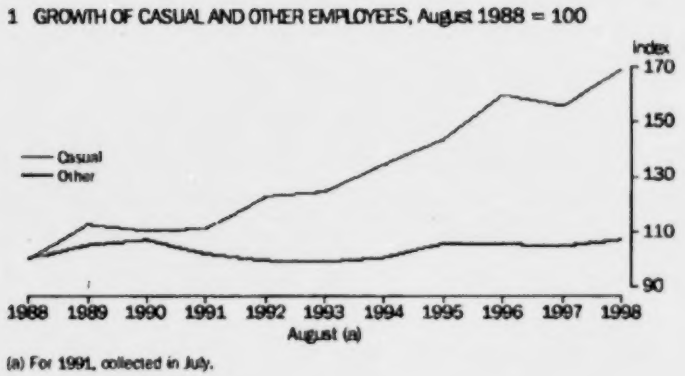

Figure 1: Trends in non-standard working arrangements, 1988 to 1998 (source, ABS 1999a).

The change in non-standard work is associated with a changing occupational profile. In the ten years to 1996 the occupations that grew as a proportion of the workforce in Australia were those that tended to require higher qualifications and further education while those that declined were those that tend to require fewer skills (see Figure 2). The pattern is consistent with the rise of the portfolio worker described above.

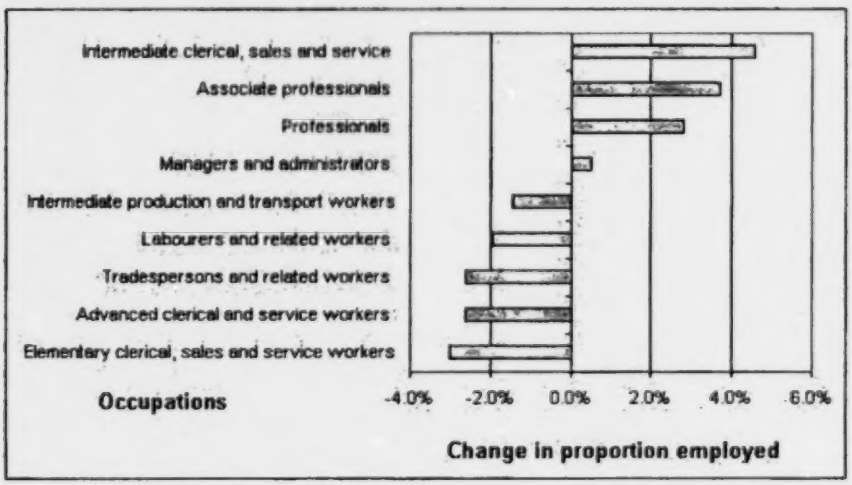

Figure 2: Change in occupational profile in Australia, 1986 to 1996 (source, ABS 2001c).

Entrenched unemployment

There has been a trend to entrenched unemployment. In the mid-nineteen hundreds, unemployment stayed relatively steady, generally less than 3% in the period from 1940 to 1970 (see Figure 3). However, in the period 1986 to 2000, the average rate from1986 to 2000 was 8.3%.

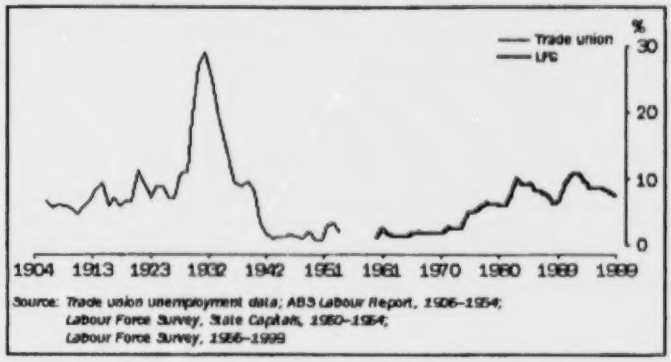

Figure 3. Unemployment rate in Australia through the 20th Century (source, ABS 2001a)

The logical outcome of this trend is that those in society, who are more vulnerable, including those with limited literacy and numeracy skills, will be more likely to be unemployed.

Rifkin (1999) claims that:

> With near workerless factories and virtual companies already looming on the horizon, every nation will have to grapple with the question of what to do with the millions of people whose labor is needed less, or not at all, in an ever more automated global economy. (p. 2)

The signs for the future of work are already there, marked by a decline in consumer purchasing power, the rise of the 'portfolio worker' described by Comfort (1997) and Kerka (1997) as the out-sourced self-employed contractor working across a range of job-sites, and the dramatic increase in numbers of the working poor—those who must hold down more than one job but still only manage to keep on the poverty line. For the latter group, in terms of income, unemployment is blurred with under-employment and multiple employment, in the sense that many people must work more than one job just to earn a little more than the unemployment benefit. For what is anticipated to be the majority of people in society who now and will increasingly in the future, fall into this group of unemployed, underemployed or working poor, what are the consequences for literacy? Where does this leave the present notion of 'workplace literacy'?

Increasingly inequitable income distribution

There has been a change in the proportion of those who have access to high paid jobs and those whose incomes have remained stable or been reduced. During the last century income distribution has increasingly shifted so that more of the nation's income is shared by a smaller proportion of the population, as indicated in the table below. In 1969, 50% of the population shared in 28.2% of gross income in Australia. In 2000, the same proportion of the population shared in 23.6% of gross income (ABS 2001a) (see *Figure 4*).

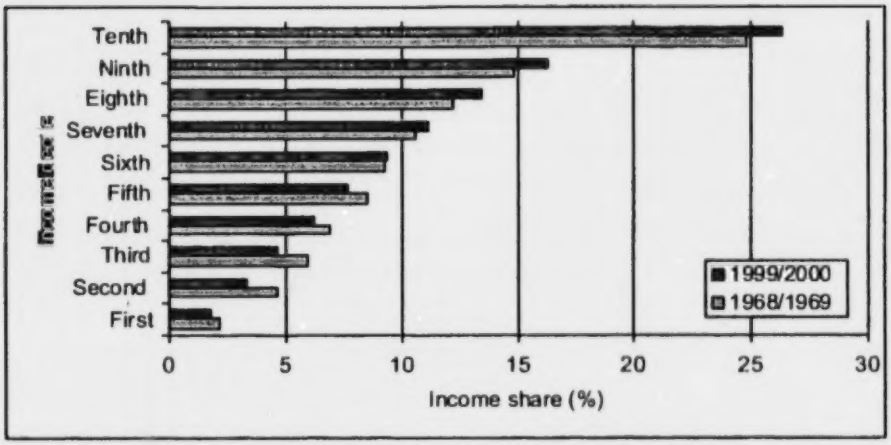

Figure 4 Income distribution: 1968/1969 & 1999/2000 (source, ABS 2001a)

Saunders (2001) summarises the growing divide between the rich and poor as follows:

> The available statistics on the conventional measures of household income reveal that, while income distribution narrowed in Australia for much of the first three-quarters of the [last] century, incomes became less equally distributed since then. (p. 17)

The income divide has related spin-offs, such as the so-called 'digital divide', which is the tendency for some to be able to 'own' access to the knowledge, power and resources that come with technology, while others do not have this access. For those adults with low literacy and numeracy skills the material aspirations of 'mainstream' Australia are increasingly unreachable.

Synthesis of background information in relation to questions for study

What are the consequences of non-standard employment and the so-called 'new knowledge economy' as it is referred to in the media and by some governments?

It is noted that the word 'knowledge' is contended: Whose knowledge is it that is the subject of the rhetoric about the new knowledge economy? It will be seen by the analysis so far that there is a wide scope of knowledges required in the present un/employment situation, from the knowledge required to prepare a job application form to the knowledge required by corporations to become 'learning organisations'.

Society currently maintains people who live and work in both the 'old economy' and the 'new knowledge economy'. A person who is a member of the dwindling manual labour pool can live side by side a so-called 'knowledge worker. As is the case with all pairs of terms, there is the problem of treating them as if they are in an 'either/or' relationship. This is not the case for people in old and new economies. It is the proportions of each group that are changing, and the proportion of people living and working in the 'old economy' is growing—and included in this group is that group of unemployed, long and short-term. There may well be a phenomenon that can be called the 'new knowledge economy' and the workforce that populates this phenomenon. However, this group is in a minority in population terms, and is likely to decrease in proportion as time goes by.

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However, the media and policy responses often seem to favour the newer concept, and may give the impression that the entire world is a member of the new 'knowledge economy', and the impression is that those who are *not* part of this brave new world, *ought to be*. It is this latter moral obligation that acts to position the majority of the members of society as 'have-nots'—a deficit notion that is counter-productive to achieving strong social cohesion and a vibrant civic democracy.

Features of the 'old economy' include:

- Low literacy skill levels.
- Low income levels.
- Available occupations are in industries in decline and rationalising to remain competitive in the global marketplace: Manufacturing, agriculture and construction.
- People who have limited access to financial, physical or human resources.

The 'old economy' is characterised by people who either have no formal qualifications or who have VET qualifications.

- Those with no formal qualifications have reasonably free access to VET qualifications, which to some extent enhances their job prospects.
- Those with no qualifications are more likely to be older, not in the labour force, from an Indigenous background, have left school early or who are dependent on social security.

Features of the new 'knowledge economy' include:

- High skill levels.
- Higher income levels.
- Occupations in education, government, finance and communications industries.
- People with tertiary qualifications.
- People who have ready access to financial, human physical resources.
- A family history with high skills and / or literacy levels.

The problem for those now living in the world of the 'old economy' is that there are several barriers that inhibit them from accessing the world of the 'knowledge economy'. These barriers include low income, cultural and social factors, issues of physical access and age.

There are few resources available to the increasing numbers of people still living and working in the world of the old economy to help them break through the barriers. Enhanced literacy and numeracy skills is a factor that bridges the gap but current funding arrangements are largely restricted to embedding literacy into VET programs where literacy skill demands are relatively low.

If things remain as they are, there are increasingly limited means for individuals living and working in the old economy to access the potential benefits of the knowledge economy. Individuals need to be young (less than 24 years old) and training in an industry / occupational category (such as health / information technology, professional / associate professional) and come from a socio-economic / family background that provides them with appropriate financial resources and a positive learning culture. For those who are older than 24 or who are

training in the more traditional areas of VET the probability that they will participate in Doyle, Kerr and Kurth's (2000) 'good' or 'elite' jobs is low.

The task of this section has been to make connections between the literature review outcomes in the previous section and the three questions for the study. In order to achieve this, a set of propositions will be put, each of which summarises a key aspect of the literature and discussion in the section just past.

1. Around 92.5% of the workforce for the year 2010 will not be able to benefit from primary school literacy and numeracy education initiatives, so one has to question the point in waiting for these 'basic skills' to impact on the workforce or population of the future;
2. Literacy is in any case not only about the three Rs, but also about a multiplicity of literacy and numeracy interactions in increasingly complex social milieux;
3. There are four identifiable strands of research and practice in adult literacy and numeracy: The *Basic skills and functional approach*, the *Growth and heritage approach*, the *Critical cultural approach* and the *Learning literacies through social capital approach;*
4. The literature on so-called 'generic' and 'transferable' skills is contradictory, unclear and points to a conclusion that these terms are motherhood statements for desired but unreal behaviours;
5. There has been a reported sharp increase in non-standard work – casualisation, contractual, outsourcing and growth in telework in the home;
6. In Australia in the year 2000, only a little over 50% of the workforce is now employed in permanent 'traditional' jobs;
7. The idea of the 'portfolio worker' has emerged as a major new identity of the knowledge-based economy. These new workers are presumed to carry with them a 'portfolio' of skills which, ideally, transfer to multiple workplaces;
8. In the ten years to 1996 the occupations that grew as a proportion of the workforce in Australia were those that tended to require higher qualifications and further education while those that declined were those that tended to require fewer skills;
9. A smaller proportion has access to high paid jobs while a larger proportion have incomes that have remained stable or been reduced;
10. The conceptual basis of the term 'knowledge economy' is problematic. There are critical questions that must be addressed, such as 'whose knowledge is it that is being referred to here?' What *other* kinds of knowledge contribute to socio-economic well-being apart from the rather narrow business-sector definition of knowledge usually referred to?

What does this set of propositions mean for literacy and numeracy practices of those whose un/employment situation have changed? What is life and work *really* like in these 'new times'? Is 'knowledge work so different from 'old economy' work? What kinds of literate and numerate practices do 'knowledge workers' need? What sorts of literate and numerate practices are needed by the greater numbers of un/employed who are unlikely ever to access the ranks of the knowledge workers?

No empirical research has been found that actually tells this story, which is the rationale for this research and its design. By examining the non/working lives of five people with widely different occupational profiles, this project aims to raise the knowledge-base about these issues through focusing on three specific research questions:

1. What are the communicative skills reported by the respondents?

2. Is there evidence that the identified skills are 'generic' and do transfer?
3. What is the explanation for 'generic' and 'transferable' skills?

Drawing on the previous discussion and set of propositions, the literature review has teased out many of the underlying issues. It can now be seen that stereotypical ways of viewing literacy and numeracy are not the way literacy and numeracy are conducted in real life. It can also be seen that there will always be a larger than average proportion of the population who will not be able to achieve the much vaunted 'knowledge worker' status, yet are being positioned by media and policy to believe that this is the way of the future for all, and that they are somehow inadequate if they cannot reach this status. At the same time it is unlikely that more than a small minority of the working population could be called 'knowledge workers', and it is probable that this proportion will decrease, with consequences for the increasing proportion of 'have-nots'.

In order to investigate the three research questions and raise the knowledge base about the background issues informing them, the following aspects of methodology, procedures and techniques were selected.

Methodological approach

How did the study generate the required information to answer the three questions?

The general methodological approach was one of theory building—the generation of information about a question—because little is known and none researched about this topic. Steps in the research included:

- Literature search of the areas of non-standard work and 'generic' literacy and numeracy skills;
- Using a 'purposeful sampling' approach (Patton 1990), five information-rich cases were selected and studied in-depth in order to illuminate the questions under investigation. Case data participants were sought from a number of industry sectors, including Information Technology (IT), rural industry, education, the unemployed and blended community work. Each 'case' did not represent one of these sectors, as most had life experiences across all of these, while the present experience of some cut across them;
- Data collection included semi-structured interviews and some observation, where appropriate;
- Analysis of data occurred in order to identify the generic literacy and numeracy skills that might be transferable, and to ascertain the manner in which they are transferred.
- Analysis of data identified implications for literacy and numeracy policy and practice in relation to the requirements of non-standard workers.

The characteristics of 'non-standard workers' established from the literature were these: Casualisation and out-sourcing, telecommuting, the variety of different jobs in which the employee is engaged, the nature and frequency of non-work, and the phenomenon of 'portfolio work'. Once again, no single case was found that could be claimed to represent each of these singly, as many had experience of several phenomena.

As a result, the following individual cases were selected, and they represent a coverage of the 'non-standard worker' characteristics as shown in Table 3.

Case study	Casualisation & outsourcing	Telecommuting	Multiple current jobs	'Portfolio' workers
Janet			■	■
Clara	■	■	■	■
Godfrey		■	■	
Jeremy	■		■	
Christabel			■	■

Table 3. Case studies and non-standard worker representation

Procedures for gathering data

A 'purposeful sampling' approach (Patton 1990) was used to select the five cases to be studied in-depth. Information was sought from a number of industry sectors, including tourism, training, rural industry, and part-time work. A process of enquiries and approaches resulted in the selection of the five participants with the potential to provide information-rich cases.

Data collection instruments utilised

Semi-structured interviews were conducted over two periods of one and a half to two hours each (see Appendix A). The interviews were taped and transcripts made. Observation notes were made during the interviews.

Data analysis

Under the literacy sub-skill headings of Reading, Writing, Speaking and Listening, and another heading for Numeracy, relevant comments were listed from the interview transcripts.

Rounding off Part 1...

The study is one that seeks to build the knowledge base about the role of literacy and numeracy when used across different contexts for different purposes. The idea of 'non-standard work' is a recent phenomenon, and somehow makes sense in these new times when values about work seem to be changing significantly alongside the very ways in which 'work' and non-work are conducted.

There are moments in history that mark special times. The waterside workers' dispute in Melbourne at the end of the twentieth century between the trade unions and Patrick Stevedoring was one such time. It threw a media and national spotlight on the fundamental ways in which 'work' had changed, while showing in sharp relief the inevitable flipside—unemployment. Suddenly, the nation became aware that those who apparently worked 'for' a boss in reality no longer worked for *that* boss, but for *another* one—a company with different legal commitments and different work entitlements. Similarly, banks are outsourcing labour at high rates, as are other major employers, in the interests of Australia's big business ('the economy') becoming more 'competitive'.

Unfortunately, as Part One has shown, there are downsides in what the research reveals. One of these is that the most privileged 'knowledge workers' section of the labour-market, while receiving most of the public resources for training in literacy and numeracy, has reducing access to those resources. A second section of the labour market is stuck in the 'old economy' and has neither the inclination nor time to access the myth of the 'knowledge economy'. Neither do they have much hope of accessing the skills-development mechanisms that might prepare it for 'new work'. A third group is unemployed and likely to stay that way. For these, the myth of 'new work for new times' is a cruel hoax, held as a carrot, but with no hope of a paid job at the end. There is a section of this group who are entrenched unemployed. While it is convenient to write this group off as being recalcitrant, indications are that the group is growing. To write them off would be a sign that society is prepared to write off a significant part of its future, since the larger portion of them is youth.

The five cases for which the data described above were collected, are reported in the section to follow. In these cases the voices of a cross section of those who are living the myth of non-standard work are heard. Some could be called 'knowledge workers', some could be called 'non-standard workers'. One at least is confronted by a life outside the 'work' ethic, whatever that might mean. All seem to be doing what most people have always done, and that is turning their hand to the ways they can earn an income by doing what they do best.

After examining what it is these five people do best in their communicative practices—in terms of literacy and numeracy—Part Three then tries to make sense of their stories.

Part 2: The five cases

In Part 2, the five case studies of five individuals are presented. The five individuals are:

1. Janet: A 'new age' small business owner
2. Clara: A worker across multiple sites
3. Godfrey: A telecommuter
4. Jeremy: A long-term unemployed youth
5. Christabel: A non-standard worker

The five case studies are described in the following pages.

1 Janet: A 'New Age' small business owner

This is the case study of Janet, a 'new age' small business operator with her fingers in many pies at many levels. Janet's family owns and operates a successful cheese factory and shop in a regional centre in Tasmania. She says her 'work involves everything from cleaning the toilets and the shop floors, to doing budgets and strategic planning for the business'. She is heavily committed to a number of organisations, president of the local branch of the Tasmanian Farmers' and Graziers' Association, member of the Dairy Industry Association and the Institute of Company Directors. She sits on the Food Industry Council.

Janet's life, work and times

Janet says her 'whole life in my late teens and my early 20s revolved around preparation for establishing this business'. A few years after leaving school she studied for two years at a dairy technology college in Werribee, Victoria. She believes the technical background she obtained there gave her an edge over cheese industries overseas, because Australian technical training tends to be stronger on quality assurance. When she finished at the college, she went to the UK and made cheese there for two years. In Lancashire she did work in marketing and product development, assisting a marketing manager with the work he was doing to get new markets in the various supermarket chains. She feels this experience was invaluable.

When she came back to Australia her family began preparing to start their own cheese business. Janet did all the design work for the layout of the factory. They began production and later opened a shop on the factory premises.

> I was only 23, and there was an enormous amount of responsibility being thrust upon my shoulders, and it was quite terrifying to say the least.

Janet has participated in many courses, short and long, in order to improve her skills. She did an intensive one-week training course at the Institute of Company Directors. She has done formal training in occupational health and safety. She participated in a number of leadership training programs, doing courses in agri-politics ('lobbying governments, getting involved with government in various things, media training and all of that'). In recent years has been involved in the delivery of leadership programs. She has been awarded a Vincent Fairfax Fellowship that involves various travel experiences over an eighteen-month period, including four weeks overseas.

She says, 'Roles that I take on outside the business often are of great assistance inside the business as well.' She values this broadening of her perspectives.

> I can go to an Industry Training Board meeting and view things from the perspective of someone who has been a vocational training student, as an employer, or from a farming perspective, and also from a perspective outside farming. Very few people who sit around those tables can do this. I also have the perspective of someone who is not only working in agriculture in Australia, but has also worked on farms in England, as well as doing cheese making. Through the training board I've also spent time with the Tasmanian Farmers' and Graziers' Association, and on the TFGA I tend to view their operation from the point of view of a company director rather than an industry person with my own industry sector as my best interest. [I am able] to focus in a much more professional way on what they are doing.

She values her networks.

> I have the most bizarre and incredibly large network of people around the country that interlinks in all sorts of ways, that I can use to assist me in various [ways]. If I want information, if I need help doing something or if I want to do something new, I have all

> these people I can talk to. They range from numerous government departments to industry bodies to industry people, and that network has developed essentially through the roles that I've taken on in various other fields.

She sees herself as positive and enthusiastic, practical and creative, and she is a good organiser, 'able to do numerous things at once.'

Janet's communicative practices

Janet does much of her communicating on the telephone, rather than by using email or letters. She also does a lot of public speaking and interviews.

> That involves me going and giving talks to groups about cheese, and cheese making. Motivational speaking and so on. I speak to community groups, service groups, industry conferences, you name it I'll talk to them.... It's important for promotion of the business, and the products, and I have a high profile and I've been doing it for years, and I've done a huge amount of media. The day after I won the ABC Woman of the Year Award, I spent the entire day in the ABC studies in Ultimo doing radio interviews from 6.20 in the morning until 3.30 in the afternoon.

She credits a subject she did at school for the confidence she feels when speaking.

> I've never had a problem with speaking and articulating myself because I did a lot of drama at school. People often ask you what are the most valuable subjects you did at high school. I did speech and drama right through to grade 12 and it was really important not just from the perspective of being able to be a performer but it teaches you the confidence to get up in public, it teaches you how to speak, and it gives you the ability to think on your feet and articulate what you're trying to say.

Janet uses a blend of spoken and written instructions in her training of workers at the cheese factory.

> For some jobs we don't actually use a written work instruction to teach people how to do it because it's too hard. For example, if you are cutting cheese, you have to show someone how to cut it, not read a manual, whereas if you're going to operate the pasteuriser, which is a machine where you are pressing buttons and turning levers and taps, it's much easier to do it from a work instruction: 'This is the order you will do all these things in ...' So for certain jobs we use written work instructions and for certain jobs it's a verbal thing.

Janet's working day usually begins and ends with writing. Much of this is done at the computer: 'writing letters, ordering things, responding to emails, designing some new brochure or leaflet, or an order form or something like that'.

Her writing tasks fall into four main areas. First there is technical writing, about cheese making. The Quality Assurance program for the business, which she wrote, covered all work and cleaning instructions ('so that for every job we have here we have a written instruction, so when we are training new staff we actually have a methodology'). Then there are writing tasks of a typical business nature—record-keeping and so on. She also writes educational and media promotional documents about the business. In the broader context of her association with many organisations, she writes letters, submissions and reports.

Janet keeps 'an enormous amount of records'.

> I love statistics. I have statistics on everything, every bit of cheese that we make and every bit of cheese that we sell. I can tell you by customer, by variety, by state, by all sorts of things. I have this huge amount of information and at the end of every year I do a report for all the members of the business. It's an enormous wealth of information and I

> do all that on Excel spreadsheets and I make them up myself so I use a lot of numeracy skills in that sense.

The numeracy skill she uses most is 'an ability to read and interpret financials'. She does not believe that this ability comes naturally. She says she learned a lot from doing an Institute of Company Directors course. It taught her how to assess a business's financial state.

> There's a lot of little statistics you can look at, and just little assessments that you can make comparing certain things. That becomes quite useful and quite handy. For example, I bought in some milk in August this year, for three weeks I bought in milk and it was more expensive than had I used the milk from the farm here, but by being able to do an assessment of the cheese yield from that milk I was able to demonstrate that in actual fact we made money out of buying milk because the yield was so much higher than it would have been if we'd used our own milk. And that knowledge was gained from the records that I had from every other year, so those sorts of things actually become really important.

Janet's communicative practices are summarised below.

Reading

- Much of her reading is work related literature on dairying. She reads 'a huge amount every day'.
- Janet is going overseas soon as part of a fellowship grant. She is doing a great deal of pre-course reading.

Writing

- She has written Quality Assurance programs for her own business and others.
- She writes monthly reports on the business, records on shop sales, overall cheese sales and cheese sales by variety and by customer, production records, milk usage records, milk yield, etc.
- She prepares technical, educational, and media documents for varied audiences.
- She writes letters, submissions, and reports for organisations she is associated with.

Speaking

- Much of her business is done through phone calls.
- In teaching and training, she finds that verbal instruction is sometimes more effective than written.
- Janet does a lot of public speaking to community groups, service groups, industry conferences etc.

Listening

- Janet had no management training to start with. She has learned a great deal from the experience of sitting on various boards and committees and listening to people.

Do these skills transfer?

Janet's skills are known and respected within her industry and in the broader community as well. Her input is valued by a wide variety of organisations including the state government. She has been working at shaping her skills for these many contexts for years.

Janet is somewhat critical of the education system. She enjoyed school, but believes she is better at self-paced learning. She says entrepreneurial people often leave school early or do not

go on to tertiary education because they are impatient and want to learn 'on the job'. Her focus in her self-education now is one of growth, of continually building on her skills and understandings: 'Life is a journey and one has to make the most of the journey, and it's all about learning as you go.'

She is looking forward to the course she will do as a result of the Vincent Fairfax Fellowship, because the course's emphasis is about developing an ability to reflect and think in decision making, 'to actually reflect on the whole of the issue before you start making a decision'.

> From a life perspective it's a really useful thing to be doing, and from a business perspective, it alters the way you operate and how you think about things. You don't necessarily just accept what you've been told. My reaction to things is a lot different now to how it would have been perhaps even just twelve months ago.

She feels that many people in management do not realize how many skills they have.

> For so many people, they do their formal training when they are young and then their ongoing learning is simply what they learn on the job. [People tend to] think of their [skills as the] original piece of paper that they got, not this immense wealth of information that they've picked up along the way. People are often astounded when I say I don't actually have a tertiary qualification, but I've learnt an enormous amount as I've gone on. People have to learn how to value that and how to make that [happen]. If you want to move from job to job, how do you transform the skills that you've picked up on the job into something tangible that a new employer can recognise?

Janet has developed her literacy and numeracy skills through a process closely linked to her own personal development. As she has moved into new contexts, new contextual factors, including domain-specific knowledge and site-specific competencies, have combined with her prior literacy and numeracy skills to form new ones. In Janet, this process of acquisition of multi-literacies for new purposes and new contexts has been accelerated by her high levels of motivation and drive.

Answering the research questions for Janet

This section returns to the three research questions of the project. Under each question, the data from the interviews with Janet are here summarised and analysed.

What are the communicative skills reported by the respondents?

Janet's understanding of the term 'generic literacy and numeracy' is that these would be the basic reading, writing and arithmetic people learn at school. She says that these skills provided her with the foundation on which to build new skills on the job. But apart from a speech and drama course, which increased her speaking confidence, she does not feel than school gave her much of use in her present work.

Is there evidence that the identified skills are 'generic' and do transfer?

Janet believes her communicating skills were improved by her speech and drama course at school. These courses enable students to become accustomed to speaking to an audience. They promote clarity of diction. They also teach students about body language, and make them aware of the potential of body movements in communication.

The basic literacy and numeracy skills which she acquired at school have since been developed through a systematic and purposeful involvement in many contexts, some related to formal education and training, some not.

What is the explanation for 'generic' and 'transferable' skills?

To the degree that Janet's 'generic skills' did transfer, it would seem that this occurred largely as a result of her commitment to refining them through experience and practice. It was a highly conscious process. Janet is a practical person. Her concept of continuing learning is a hands-on one. She is also flexible, creative, and has the confidence and self-esteem to trust her own initiative. She has a proven track record in developing site-specific competencies which she can then merge into the sort of high-level skills that make her so sought after, even beyond her own industry.

2 *Clara: A worker across multiple sites*

This is the case study of Clara, a 38-year-old wife and mother of two. She lives in a small rural town with a high unemployment rate and an ageing population. Clara has part-time, casual work at the local grocery store. She also has a number of unpaid 'jobs', as a volunteer support worker and committee secretary at the local community online access centre, as a Tae Kwon Do instructor, a self-defence instructor at the school, and as a member of the local State Emergency Service team.

Clara's life, work and times

Clara would like to have more paid work, but it is not available locally. Her general philosophy about life is 'just give it a try', and in recent years she has rigorously applied this to the challenge of finding useful paid and unpaid work.

She says, 'I give 100% to every position I'm in'. She also says she 'pushes herself'. She likes dealing with the public: 'I'm a social person.'

Clara comes from a literate and bright family. She had formal education in England, with her best subjects being history and English. She remembers having ambitions to go on to university, but her school in the London suburb of Brixton went through a period of racial strife and riots. She believes her experience there helped fashion a particular kind of resilience and toughness. But in the end, her marks were not good enough for tertiary entrance. 'I missed a few of the boats.'

At the age of 16 she had a year in Zambia with relatives. Her uncle was setting up a computer company and she worked for him. 'I was sort of secretary, hostess, all sorts of things, anything but the technical side. I've always hated the thought of being a secretary but it seemed that my skills lay in that area.'

She then returned to the UK and finished her school education at a different school. 'I was reasonable at maths but they didn't offer much in science. It was a girls' school.' She felt gender-categorised, with limited career options. For a while she worked for a space systems company, 'making satellites'.

She married at 23 and came to live in her husband's home town in Tasmania.

> When I first came over here I did very little. It was a huge learning experience, I'd never lived in the country, I'd never lived in Australia, I'd never even been to Australia, and all of a sudden I'm planting vegies, looking after sheep, talking with country people who didn't understand me at all. I think they still think I'm pretty strange …

She has now lived fifteen years in the same Tasmanian town. It is one of those small rural towns where time seems to have stopped. This is both its attraction, and its curse. There are few jobs, some services have dwindled, and many people in the ageing population are resistant to change. Nevertheless a Community Online Access Centre and a Community College have opened up in recent years. Clara has enthusiastically embraced both of these. Her two children are at primary school, and she has been able to make the time to begin learning again.

Clara's communicative practices

Clara's paid work involves some reading. Customer orders are sometimes taken down over the phone. She has to read these lists and make up the orders.

Her voluntary jobs are more demanding on her reading skills. As a member of the local State Emergency Service (SES) team, she had to do a course involving a lot of reading—'There are manuals galore on procedures, protocols, stories from other people so that you get a feel for the job, and every week there's new literature coming through about things that are happening.' The SES course has to be redone every six months for re-accreditation.

Her work at the Community Online Access Centre involves reading from websites and also the reading of correspondence to the committee. In connection with the classes she offers as a Tae Kwon Do instructor, there are manuals on this martial art to read.

Reading has also been an integral part of courses Clara has done. These include a senior first-aid certificate course, a level 4 workplace assessor course, and certificate 2 in Information Technology.

Clara loves reading and tries to instil in her children an understanding of the value of reading skills.

> If you can read and write, if you've got basic skills in reading, writing and numeracy, you can teach yourself anything later. But if you haven't got those basic skills, life is an uphill struggle.

Clara's communicative practices are summarised below.

Reading

- Clara loves reading. She reads Wilbur Smith type novels for relaxation.
- Reading is a necessary part of all her jobs.
- The courses she has done recently, or is still doing, involve a lot of reading.

Writing

- She does secretarial writing for the Community Online Access Centre committee.
- She does written exams as part of the courses she is doing.
- She uses email to maintain contact with friends and family in the UK.

Speaking

- Clara enjoys talking to people. She 'goes out of her way to talk to people'.
- Speaking is a necessary part of all her jobs.
- Speaking is often part of the assessment process in courses she is doing.

Listening

- Listening is an important part of her jobs and her courses.

Do these skills transfer?

Educated in the British school system of the 1960s and 70s, Clara accepted its basic tenet that school provided you with general skills essential for employability. Literacy and numeracy skills were predominant among these. Transferability was taken for granted.

Decades later, Clara still believes her skills transfer, to a certain extent. The literacy and numeracy skills she learned at school gave her the basic skills to work in the grocery store, except that she had to learn to use Australian money and the metric system used in Australia. As the store owners are Italian, they like to stock some Italian merchandise, and Clara also had to learn about this. She believes that the literacies and numeracies she uses in the small town

grocery store would be helpful if she ever wanted a job in a different kind of store in a different setting.

> I think I'd be able to take what I've learnt and apply it and use it as a base grounding for anything else … [but] they would need to teach me [some] extra things. I'd have to develop new skills as well as using existing ones.

Similarly, she believes her experience at the Community Online Centre has developed her basic literacy and numeracy skills in another area, and that these would transfer, to a degree, in a different context. But she would have to practise as a means of developing the new skills.

> Certain things come easy but I still need to practise to keep them in there. I like to learn something and then practise it and practise it, and then it sort of sits in there, and then every now and again [I have to} go back over it.

She says: 'If you don't use the skills you've got, you lose them.'

Answering the research questions for Clara

This section returns to the three research questions of the project. Under each question, the data from the interviews with Clara are here summarised and analysed.

What are the communicative skills reported by the respondents?

Clara understands the concept of generic literacy and numeracy skills in terms of basic skills learned at school. She acquired these without difficulty at school, and has tended to take them for granted. She says she has always been good at communicating with people. She considers this to be a natural aptitude.

Is there evidence that the identified skills are 'generic' and do transfer?

Clara says: 'I'm a very flexible, adaptable person, I can adapt myself to many situations and I think that helps you learn the skills that you need in the different areas.'

Clara realizes that natural aptitudes and school-acquired basic skills can be improved and refined with experiential learning, but she feels that her flexibility and adaptability are helpful in this process. These are qualities she has learned from at times hard experience. Her school was a tough one by any standards. 'It was a case of sink or swim, you either survived or you didn't.' She survived. A few years ago a house fire destroyed most of her possessions. She remained optimistic and positive. None of her little family had been hurt. They got organised, found another house, rebuilt their lives. Her role in that was crucial.

Clara's self-confidence and drive take her into new contexts, including learning contexts, where they also help her in acquiring new literacies. She has built on the basic skills learned years ago at school, improving and refining them, but her exploratory nature has been an important factor in bringing her into contact with literacies and numeracies in multiple contexts.

What is the explanation for 'generic' and 'transferable' skills?

Clara believes in practice. She practises new tasks until they come naturally. This is a process of contextualising rather than transferring. She combines her practising, however, with a certain amount of daring and initiative. She is a risk-taker, unafraid of making mistakes. She acquired computer literacy, for example, largely by 'playing around with the computer'.

She has developed context-specific competencies in all her work areas, using a combination of self-confidence, initiative, adaptability, and an appetite for continued learning.

3 *Godfrey: A telecommuter*

This is the case study of Godfrey, a 'new age' telecommuter working in the IT field. Godfrey has managed to structure his life according to his ideal—he lives in Tasmania, which he loves, and earns his living by using information and communications technology to work 'remotely' for a Melbourne company. He works long hours, but enjoys it, and he considers himself 'a successful person'.

Godfrey's life, work and times

Godfrey, now in his mid fifties, was born and bred in one of the poorer suburbs of Melbourne. He left school at 15 and tried various jobs, then did adult matriculation at the age of 23. He has been in the Information and Communications Technology industry for over thirty years, working in Germany—his German is, as a result, 'reasonably fluent'—Nigeria, Saudi Arabia as well as in Sydney and Melbourne. In the last 15 years he has focused on software, in particular the sale of packaged software primarily for the management of computer systems.

In 1996 his work took him to Hobart. He and his family fell in love with the place and decided to move there. They wanted to 'get out of the rat race'. The transition took a few years. For a while he continued to work in Melbourne, coming home to Hobart every week or two. 'It became very wearing, tough on my family, tough on me, not something I wanted to do long term.' He got a job in Hobart, in the IT field, but basically he was office-bound. When his old company in Melbourne offered him his job back, working remotely from Hobart, he jumped at it. Godfrey, his wife and their two teenage children live in an attractive inner-city suburb of Hobart. He works mainly from an office close to their home, set up with everything he needs—a small network of four or five computers, phone lines and fax machine. He does do frequent mid-week travel to mainland centres.

Godfrey likes his job. 'Marketing is an attractive thing to be in. It's enjoyable.' His work is very much deadline driven. He works 50 to 60 or more hours a week. 'Some weeks I might only work 30 hours, other weeks I'll work 70 or 80.'

Although he works remotely, he is part of a number of networks. There is the network of workers in the software company, and other networks of contacts in the broader industry and in business generally. 'Relationships are enormously important. I have a large people network, a very broad network on plenty of different topics and subjects. All of those things have been developed over many years.'

> I've had to develop [the skill of reading a person for the best sales approach] and it hasn't come all that easily. What's probably always been there is an ability to make people feel at home, feel comfortable with me.

Godfrey's communicative practices

Godfrey left school at 15, with writing skills of a fairly average Grade 10 standard. His first jobs were mainly clerical, with limited use of writing skills. As part of an adult matriculation English course at the age of 23, he learned how to write essays and to do précis writing. He feels that these were extremely useful for his later employment, and that they helped develop his critical analysis skills.

Most of his writing these days is in the form of emails. His business emails are often follow-ups to phone conversations. He makes a point of writing emails in correct, fairly formal English, 'using aspects of the medium of the letter in the email, [but] making it a little less formal'. He likes to begin with a conversational and appreciative reference to the phone call,

and will also include some brief personal content if appropriate. 'I've developed this idea of setting the scene… so the context is right.'

He says: 'The way I write is extremely important because I want to achieve something … and it may not be in what I say, it might be the way I present [it].'

Proposals are written to a set format and in formal English. They are attached to emails and sent to the client. Godfrey writes a lot of proposals and says it has taken him quite a long time to hone the techniques involved. He says: 'I often think that maybe I could have been more successful earlier had I had a better education.'

Godfrey also uses email to keep in touch with friends and family. He says he almost never writes with a pen on paper these days. He files everything on computer. Correspondence relating to family matters is systematically filed on computer, as are all business matters.

Godfrey's speaking skills are an intrinsic part of his work. Much of the work is done over the phone. Presentations are also a very important part of the work.

When, at the age of 23, he decided to do an adult matriculation course, he also decided to work on his speech.

> Like any kid that left school at 15—having lived in Collingwood, which is a fairly poor suburb in Melbourne—I didn't speak all that well. I had a very broad Australian accent and dropped g's off like everyone does. I worked hard at learning to be able to express myself a bit more clearly. I think reading helped a lot. My mother was a reader. I read mostly fiction but nevertheless I read a lot. So I worked on improving [my speech] and [thus] improving my profile.

He came to use less and less Australian vernacular speech.

> When I went to Germany I had to get out of the habit. I lived there and spoke German and when I spoke English they didn't understand the Australian vernacular so I had to lose that and I've probably got it back to some extent but I try not to [use it] because [if] you're speaking to a Russian or someone they don't understand.

In discussions with clients, he tries not to use esoteric terms. He says, 'Part of any salesman's job is to put the client at ease.' He favours a simple business language. He has developed a telephone technique which he regards as very important. He tries to include a personal aspect early in the conversation. If he has met the client before, he will have a note in a file in his computer. He also has a very good memory. He will ask after the family, or perhaps just ask 'What have you been up to lately?' The personalising aspect 'establishes the relationship again'. Then he will ask if they have a minute to talk to him, and the discussion will evolve from there.

Godfrey's communicative practices are summarised below.

Reading

- Godfrey reads work related literature on marketing, running small businesses, etc. Much of this is downloaded from websites.
- For relaxation, he reads adventure stories like those of Clive Cussler, Jack Higgins, or John Buchan.
- He reads the local daily newspaper.

Writing

- His writing almost entirely consists of emails with attachments.

Speaking

- 90% of his business is done through phone calls and follow-up emails.
- Presentations are an important part of his work.

Listening

- Listening is an important part of his selling technique.

Do these skills transfer?

Godfrey's present day writing and speaking skills are considerable. They are indispensable to his success at his work. They are the vehicles that enable him to 'sell' his IT knowledge and skills.

He has developed his writing and speaking skills over the more than 50 years of his life to date. The development began with the conditioned learning of school in the 1950s and 1960s, with its emphasis on rote learning and patterning. He left school at Grade 10 level, with an average command of basic skills. Development of writing and speaking skills in his early working years was unconscious and random. At the age of 23 he was doing Adult Matriculation English because he thought he might like to go to university. He says something 'switched on' for him in that year. His writing and speaking skills were important elements in an conscious but mostly informal personal development process he then commenced.

He was an intelligent and flexible young man with a keen awareness of his learning strengths. One of these is the ability to reflect constructively on his learning activities. Schooled in a period of emphasis on 'content', he found his own way to a more process-based learning. The result has been an accumulation and aggregation of writing and speaking skills and sub-skills, and these are the extensive basis for the skills he uses in his work.

Answering the research questions for Godfrey

This section returns to the three research questions of the project. Under each question, the data from the interviews with Godfrey are here summarised and analysed.

What are the communicative skills reported by the respondents?

Godfrey believes communication skills are a vital part of his work and his success. But verbal communication, he says, 'wasn't one of the strong points with my family' when he was growing up. Neither does he believe school helped develop these skills much. He credits the adult matriculation English course he did at age 23 as 'switching on' in him an awareness of what communication skills can do for you. Later, as he moved down the paths of his working life, he began deliberately to hone these skills.

> I've always got on very well with people, but it wasn't a focus for me to understand how people might think, or [to] listen, to focus on what they really are saying instead of [just] what their words are saying. [These days] I use my communication skills to clarify what people say to me; in the past I wouldn't have done that—'in the past' being, before I moved into the sales and marketing role.

Closely related to his development of these skills is a fine-tuned awareness and sensitivity to the requirements of people in the business or potential clients. This has come from years of experience in the industry, but it has also been a conscious goal, an outcome which he knows is connected to his communication skills outcomes.

> I learnt an enormous amount about how businesses worked, the way people think, what makes the money, what they don't like, what they do like. So I have I believe I have a great ability in translating what business wants into something that an IT related

> application or system can deliver to them, which will bring benefit. I think that's the major skill I have.

Is there evidence that the identified skills are 'generic' and do transfer?
Over the years Godfrey has participated in a large number of training courses aimed at developing personal and verbal presentation skills. He feels these have helped increase his confidence and in this way they 'helped enormously'. But he believes that the courses that helped most were the ones where he had the opportunity to put his new skills into action immediately.

> I think that, if you don't use these things, they are largely lost unless you make the effort to go back and revisit all your notebooks and course notes.

Godfrey's skills development in literacy and numeracy has been an exponential process occurring out of interaction with new contexts and their multi-literacies, rather than one where he simply achieved transfer of generic skills to new contexts.

What is the explanation for 'generic' and 'transferable' skills?
For Godfrey, the degree of transfer that has occurred has depended on the immediacy of application of the learning. He notices this in the context of the various courses he has participated in. On the other hand, he thinks courses 'are enormously helpful'. What he gets from them seems to be something at once less and more than the course providers' intent.

When the opportunity to practise was not to hand, the core course skills have not always transferred. However, the contexts into which the courses gave him access, also provided him with opportunities for developing new literacies. Godfrey says he is an adapter. He is good at absorbing new knowledge, and new literacies, and using these to form new tools for his own uses.

4 *Jeremy: An 'enculturated' long-term unemployed youth*

This is the case study of Jeremy. He is 19, was born in Queensland, and is now living in Tasmania. Jeremy's birth mother and father were Aboriginal. When he was born, her long-time partner had just left, leaving her with a number of children. When Jeremy was three and a half months old, she put him up for adoption, but insisted he be placed in an Aboriginal family. She agreed to his placement with a white family who already had an adopted Aboriginal boy.

Jeremy's life, work and times

Jeremy had a mainstream education in Queensland. Teachers commented that he was bright, good at maths, but negative and always in trouble. He identified with the 'bad elements' in the school. His adoptive parents were never happy with his academic progress, and once shifted him to a Catholic private school that had a Grade 2 teacher with a reputation as a reading teacher. After one and a half semesters there, she was pleased with his progress until the parents asked if she had heard him read individually. It turned out she only ever heard him read along with the rest of the class. He could not read anywhere near as well as she thought.

Jeremy's father made two attempts of his own to teach his son to read, using a standard phonics and sight-word approach. But Jeremy remained essentially illiterate. He could never see any relevance or connections between 'school' literacies and his 'real life' literacies.

Jeremy was expelled from school in Grade Nine. At the expulsion meeting, attended by year coordinators and counsellors, the school principal said: 'The problem with Jeremy is that this is a very middle class school.' Jeremy says:

> Basically it was just the staff didn't like me, because of my attitude. Because I didn't act the way everyone at school wanted me to, like I didn't, I mean, I didn't exactly do everything I was told, but you know, I was a little bit of a rebel, but I mean who wasn't, when they were a teenager?

He says no one tried to help him.

> Like sometimes yeah I did want to try, I did want to do the work. [But] if you can't keep up to even just an average standard, they'll leave you behind, and the only way you're going to catch up is if like—oh there's pretty much no way you can catch up, unless you study [all the time] and I don't think any teenager wants to do that. The education system sucks, let's just put it that way, it sucks.

Over the past three years, since he was about 16, Jeremy has been enrolled in the Launceston College part-time program. He has made desultory attempts at a number of subjects, with patchy attendance. Due partly to the efforts of the Aboriginal art teacher, he has retained some interest and does attend from time to time.

Jeremy has had two jobs. He worked for a forestry labour-hire company for a while, 'pruning trees and stuff'. He says he liked the work but it was very low paid: 'It's more slave labour.' The pay was in fact less than unemployment benefit. He also worked for a skateboarding and surf shop, selling clothes and skateboards. He says he liked this job too, but found working with customers 'pretty hard … I'm not exactly the most … open person … I'm shy.'

He also says 'Paid work is … I reckon it sucks to tell you the truth. I could almost guarantee that three quarters of the people in the whole world that are working don't like their jobs. And I think what's the point of working if you're not having fun.'

He is now on unemployment benefit. 'I'm having too much fun to want to actually go out and find work.' He likes skateboarding, sports, and partying. He loves music, mainly hip hop, but he also says he loves jazz and will listen to classical music—basically anything that's got a good feel to it'. He thinks he might enjoy playing sport for a living. But he calls himself 'bone lazy'. He also has a drinking habit. He says his dole 'goes straight to booze, because you wait two weeks just to get some money and like I mean that's the first thing I want to do is have a drink'.

> It's easier for a kid—oh it's easier for me anyway, to go out and go get a bottle than to go out and look for work because like you know I obviously I haven't had the best education so I'm not exactly going to be able to get a job. I wouldn't even have a resume, I probably do, but you know what it's one page, whereas you look around and you see people, you know, books, you see people with books of you know resume, and you think oh well, you know, they're going to get a job, they're going to get a job before me aren't they, and [drink is] the easy way out.

He says being Aboriginal has been, in some ways, 'hard as hell'. At school he thinks his Aboriginality made teachers uncomfortable. 'Most of the staff just looked [at me] as if I was nothing. You could see fear in their eyes, you know, you could tell that they were scared of me, and intimidated.' He has had 'a fair few fights, over my colour and stuff like that, I've had heaps of fights over that'.

> The way people look at you and think, well, you know ... Most of the time I can't walk into a shop without a staff definitely keeping an eye on me. They may not like stand right, you know, right near me, but you can tell as soon as you walk into that shop that they've got their eye on you straight away. Basically it is because of my colour, and they, you know, there's all those stereotypes, oh you know, if he's dark he's a thief, or, you know, he's a criminal, or, you know, he's just bad all round.

He says he has been aware of racial prejudice since he was about 10. He had a quarrel with a mate who hurled a lot of abuse at him, but the worst word was 'coon'. 'He can call me every name under the sun but as soon as he said that one word, I snapped, and he was one of my best mates and I ran up and decked him.'

Fighting is one of the main ways Jeremy interacts with his world. It is his main response to perceived hostility, and also a way of expressing friendship and loyalty.

> I've had heaps of fights in my time. Mostly it's just disagreements that led to something that probably shouldn't have led to what they did. Or if I, if I see a mate getting beat, I'm not going to stand there and let him get beaten. I'll back up any ...I'll back up most of my mates, for anything.

What he looks for in a mate is 'someone who doesn't judge you'.

He says: 'The law sucks.' He despises the police. He believes they harass young people, and Aboriginal youth in particular. At the age of 14 he and a 16-year-old mate were in a minor confrontation with police, when 'basically I just picked my skateboard up and hit one of them around the head. I remember it took, there was four cop cars and seventeen police officers just to arrest a 14 and a 16 year old'.

He values 'friends and family'.

> You can't go through life without friends, or family, you just can't do it. [They] help, they pick you up when you're in the dumps, they bail you out if you get in gaol, they look after you if you're sick.

Jeremy defines himself firstly as Aboriginal, and secondly as a sportsman. His sense of Aboriginality has led him to reject much of what white Australians stand for. He rejects the law, he rejects the work ethic, he rejects the education system. He rejects the conventional aspirations of average young white Australians, except with regard to sport.

He says he can adapt his speech and behaviour to many varied contexts. He sees this as an aspect of personality.

> I don't even have a normal personality, I haven't even got a personality, I've got about 100 different personalities, to tell you the truth and that's what I reckon about everyone else too, I reckon everyone has got like 100 million different personalities.

When asked how he thought other people saw him, he had difficulty. 'It's a bit hard to explain.' He could not answer.

Jeremy is a young man apparently still searching for an identity, a sense of self. His often fragmented expression may be a reflection of this.

Jeremy's communicative practices

At school Jeremy acquired basic reading skills to only a limited degree. The efforts of his father to teach him also failed. The child may have had cognitive difficulties, or psychological ones, or both. He says he did not cope well with a classroom atmosphere, and this may have extended to the one-on-one teaching context with his father. However, after leaving school, he worked at improving his reading, and he says he found this easier—'because I didn't have to keep up to the standard that you are supposed to work in school, like I could take my time and if I didn't want to read any more I didn't have to, and I don't know, basically you just work at your own pace'.

> I'd wake up of a morning and read the paper. I'd try and then every day I just started reading more and more and more about … Like just, you know, even if it was junk, even little kiddies' books, I'd read little kiddies' books … I did it because I wanted to and because I… I needed to do it.

Communicating across a range of diverse socio-economic networks helped Jeremy compensate for the illiteracy in writing and reading he experienced for the duration of his school life.

Given that speaking is the dominant communicative practice in Jeremy's life, he does recognise the importance of reading and writing in his life, while still seeking assistance for 'official' literate and numerate practices, such a filling in forms and non-routine banking tasks.

Jeremy's literacy and numeracy practices are summarised below.

Reading

- Jeremy is not a reader. He says he was told at the age of 14 that he had a reading and writing age of 8. After leaving school he made an effort to improve his reading.

Writing

- He says his handwriting and spelling are 'shocking'. However, after being expelled from school he made an effort to improve his writing. He likes to write song lyrics, 'rhymes and stuff'.

Speaking

- Jeremy says he can adjust his speech modes to talk to people of different ages and walks of life.

- His syntax in the interview was often disconnected and at times he had trouble finding the right expression.
- His speech, and discursive elements in it, reflect the experience of a young man in search of identity.

Listening

- Jeremy had trouble answering a number of questions in the interviews. While he seems to have understood the words of the questions, he was not able to connect the questions with his own experience. The sorts of questions involved were: 'Describe how you think other people see you' (Answer: 'It's a bit hard to explain') and 'Can you think of a time when something big happened when you got help from your mates, when that judgmental business came into it?' (Answer: 'Oh, yeah a bit, but I can't think of any, um I can't think of anything really, that…')

Do these skills transfer?

Jeremy's acquisition of basic literacy and numeracy skills has been too flawed to form the basis of any possible transfer process. His enjoyment of writing 'rhymes' or song lyrics reveals a natural feeling for language as a vehicle of self-expression. It is an indication of sub-surface literacies with which he is more comfortable than with the more conventional ones of the world of white Australians.

Jeremy's Aboriginality, his unemployment and his limited literacy and numeracy skills place him with vulnerable subgroups in Australian society. The combined effect of belonging to all three subgroups is to complicate and undermine aspects of his sense of identity and self-confidence.

Answering the research questions for Jeremy

This section returns to the three research questions of the project. Under each question, the data from the interviews with Jeremy are here summarised and analysed.

What are the communicative skills reported by the respondents?

Jeremy understands generic literacy and numeracy skills in terms of the basic grounding which he did not get at school. Describing his post-school efforts to learn to read and write, he focused on sounding out words and on his lettering.

> When I used to write, I used to write in block letters and just say I wanted to spell—I don't know—'this'. I'd put a normal t, capital H, capital I and S, because it was, that's just how I wrote. It could be any word, it could be 'it', I'd put a capital, you know I'd put a little i and a capital T, it's just the way I did it. And I, and then once I started doing all this stuff by myself, I started getting that, yeah like I started getting my letters so they were joined, like a real neat person.

> When I was going to school I was shocking at my reading and writing. When I started doing it by myself, I could actually notice the changes in my style of writing and how fast I was reading, my spelling and stuff, like that.

Is there evidence that the identified skills are 'generic' and do transfer?

Jeremy likes to write down short song lyrics which he makes up. The skills self-learned after leaving school hold meaning and purpose for Jeremy and so he found his new literacy and numeracy skills clustering around each new and purposeful situation requiring literacy or numeracy.

Writing letters to his girlfriend is one such example. The purposeful nature of the act of forming a letter integrated the skills he possessed, and drew on those of his parents as well, as he sought their advice on spelling, forming letters and words, meanings of words and so on. The collaborative act of writing song lyrics with his mate is another example, where the meaningful nature of the purpose in hand set an atmosphere where risk-taking with his own self-efficacy and identity could occur in a non-judgmental milieu in pursuit of a common goal.

None of these instances holds out any evidence that there was (or is) a basic core of skills that were or are transferred. More, the evidence suggests that success in learning and executing literate and numerate practices is driven by the need and purpose *that is embedded in a specific context or setting that promotes positive self-efficacy.*

What is the explanation for 'generic' and 'transferable' skills?

It is quite a long way from a truncated school career when he had a reading age well below average, and self-teaching by means of the newspaper and 'little kiddies' books', to writing down song lyrics of his own invention. The lyrics are inspired by his own feelings and take form in accordance with Jeremy's experience of listening to his favourite music. His enjoyment of this provides the purpose he needs for the learning and so motivates him to write them down. The successful literate practices are driven by this purpose.

Given the negative self-efficacy experienced as part of entrenched racist school experiences and the resultant impact on self-efficacy, there is more evidence to support the assertion that for Jeremy effective literacy and numeracy is related strongly to secure and supportive learning environments that foster self-efficacy rather than to any idea that sound 'basic skills' could in any shape or form set this youth up for a literate life.

5 *Christabel: A non-standard standard worker*

This is the case study of Christabel, who has two jobs. She works part-time as an instructor in Health and in Dance at a senior college (recently this has become full-time). She also owns and operates a private dance school in the evenings and on Saturdays. Christabel is married to a journalist on a provincial city newspaper. They have two children.

Christabel's life, work and times

As a child Christabel had learned Highland Dancing and had been successful in many competitions. Later she extended her dance repertoire and began operating her own private dance tuition classes. Meanwhile she trained as a Physical Education teacher and worked in primary schools and then in senior colleges. After a time she came to teach mainly dance and the health aspects only of the Physical Education curriculum. Over the years she taught in many disadvantaged schools, but is now on the staff at a 'good' school. She says this has its own stresses, because you never know when the Department will transfer you.

Her private tuition business has grown considerably and she is involved with that most late afternoons and evenings of the working week, and also usually on Saturdays. She has 12 hour days and a working week of around 60 hours. She says: 'It's pretty much a fairly hectic life style.' She enjoys this. She cannot imagine having only one job and 'just coming home every night after school and cooking the tea'.

She is highly organised: 'You have to be really organised when you're doing two jobs. I've got to be organised, I don't know whether I *like* to be organised.' She calls herself 'a creature of habit' and equates this with her organised lifestyle. She hates change, and says: 'I'd be happy to have the same routine for the rest of my life.'

She likes 'being the boss'. But as a team member on the college staff, she tries to maintain a positive and supportive attitude.

> I hate it when people whinge about things yet they really don't have a solution. They're just a waste of time and energy. You have to make the most of what you've got and some people are just never happy.

But she admits to being emotional.

> My whole face just gives [me] away. I cry every single day I reckon, for happy things as well as in anger, in happiness, in sadness. I think kids appreciate the fact that you can just be yourself, and I don't think I've ever growled, [but] I've walked out on classes. Tears can actually work in your advantage, yeah, much more than yelling and screaming ... It's probably the actress coming out in me too, probably.

She is a worrier in the face of change. 'I sort of lay awake in bed and ...' She feels insecure because of the ever-present possibility of departmental transfer. When her staffroom was told of a second dance teacher coming, all her insecurities welled up.

> I just felt my heart go ... actually I felt like I wanted to vomit. I could just feel the whole of my face ... I was about to burst into tears. I was totally over-reacting, and thinking 'Oh they're just trying to get rid of me and I've been so looking forward to doing the production' and I thought 'Oh I'm obviously not going to be able to do that now'. You know, total jump off the roof type of thinking.

She has a very wide network of friends and contacts, and finds this vital. 'You can't possibly do everything yourself, and I have lots of friends who I can call on to come and help.' Much

of her support network comes from growing up and living in the same neighbourhood and having family close by.

Christabel's communicative practices

Speaking is the main communication skill Christabel uses in her work. Two work styles, and therefore two speech modes, are involved. First there is the more conventional teaching style of her Health classes—presenting and explaining information, facilitating learning by setting tasks. She uses the blackboard as an aid when speaking to the class as a whole. Her speech is a blend of informality and instruction. When students are working in groups, she will circulate. Her speech then is more conversational. Her Dance classes, whether at the college or in private tuition groups, involve a casual, participatory style of working. She speaks constantly while demonstrating movements and helping individuals. At other times she sits on the floor with the students and talks with them about they are doing. Her speaking style is especially empathic at these times. She gets on very well with teenagers and there is a lot of laughter in her classes. Some of her private tuition classes are for younger children, and here her speaking style is deliberately motherly.

Christabel's teaching personality is an extension of her private one: 'I try to be the same person to everybody.' She is able to use her speaking skills to project a teaching personality concentrated into a strong motivating force in her interactions with her students. She appreciates that she is in the happy situation of teaching a subject which students like, where it is easier for students to like the teacher, and she uses the situation to full advantage in her teaching and their learning. She achieves this advantage through her communication skills, and in particular through speaking.

Christabel's communicative practices are summarised below.

Reading

- Christabel does not read much for work.
- For relaxation, she reads murder mysteries.
- She finds reading students' assignments a chore.

Writing

- She uses email to keep in touch with people.
- She writes comments for student references.

Speaking

- She uses the mobile phone a lot.
- Teaching involves a great deal of speaking.

Listening

- Christabel says she is 'a good listener'.

Do these skills transfer?

Christabel has been associated with communication through dance—performance and teaching—for most of her life. It is closely involved with her sense of identity. The speaking skills evident in her teaching of dance have been developed over a lifetime, along with the speaking skills of her everyday life. As a child performer she was extremely successful at dance. The growth of personal support networks, trust, and communication skills were

interwoven with the practice and teaching of dance, and these have occurred over a long period of time.

While she appears to be brimming with self-confidence—which has also developed in time with her dance skills—she admits that her emotions sometimes undermine this. Change is the trigger for dramatic dips in self-confidence. However she also shows resilience. These characteristics have fashioned her communication skills. She likes to express her emotions, and does so freely and vividly. Her confidence as a dancer, and her resilience as a teacher of many years in disadvantaged schools, have shaped her interaction with the dance and teaching contexts in which her literacies have been formed.

Answering the research questions for Christabel

This section returns to the three research questions of the project. Under each question, the data from the interviews with Christabel are here summarised and analysed.

What are the communicative skills reported by the respondents?
Christabel places emphasis on communication skills. She sees these as innate, to a certain extent. She believes she is a natural communicator. She is very self-expressive, both in words and in body.

Is there evidence that the identified skills are 'generic' and do transfer?
Christabel's domain-specific knowledge is heavily oriented towards dance. Her identity is closely bound up with dance, and her development of literacies connected with dance has been achieved through the medium of identity and personal growth.

Her communication skills have been developed and refined over the years of a life interwoven with dance.

What is the explanation for 'generic' and 'transferable' skills?
Christabel has characteristics of creativity and initiative which have been important in developing a teaching style closely linked with her personality and sense of identity. From this, the literacies associated with the personal and vocational aspects of her life have been allowed to develop naturally, rather than consciously or deliberately. They are closely integrated with her personality.

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Part 3: Answering the questions for the study

The three specific research questions that are addressed through the research are:

1. What are the communicative skills reported by the respondents?
2. Is there evidence that the identified skills are 'generic' and do transfer?
3. What is the explanation for 'generic' and 'transferable' skills?

Part 3, the final part of the book, reports the findings of the study under the three research questions.

It was noted in the Literature Review that a model developed by Freebody and Luke (1990) on the four roles of the literate person held out some promise as both an explanatory framework and a means of making sense of the interview data on the five learning lifetimes reported in Part Two. In fact, the vast majority of the data supports the Freebody and Luke (1990) four groups of knowledge, skills and identities (roles) of the literate person: Code breaker, Text participant, Text user and Text analyst. However, it takes that framework a step further in articulating the purpose for learning and the organisation of knowledge and identity resources within the four roles around purpose in making the connections to the wider society's socio-economic framework.

The Freebody and Luke framework did not set out to explain how these roles might intersect in a 'learning lifetime' for adults, nor how they may change and interplay over time. This project, however, does shed light on these two factors—the intersection of the four roles as perceived over the span of five lives.

In reading the answers to the research questions that appear in the next section, it will be of interest to consider how the four groups of knowledge, skills and identities that make up the roles of the literate person come to life through the synthesis of the data from analysing the research questions in light of the five case studies.

What are the communicative skills reported by the respondents?

The participants comment on the communication practices relevant and necessary to their current and recent lives. Comments about school-based communicative learning experiences mainly note the lack of relevance of school-learning for their current needs. The most notable of these is the skill of 'speaking'. With the exception of Jeremy, for whom school is a relatively recent experience, there is very little reference in the data, unprompted, about 'school literacy and numeracy'.

Catalogues of communication skills were established for each of the respondents, and these are detailed in the respective case studies in Part Two. They include the same kinds of skills expected in any work—reading, writing, speaking and listening. In fact the importance of speaking and listening arose on a number of occasions. Godfrey, the telecommuter, describes how communication skills are now a vital part of his work and his success, but this was not always the case, and not something he was taught to do at school, and yet these skills are the most important communicative practices in his 'working lives' nowadays. Closely related to his development of his communication skills after his schooling is a fine-tuned awareness and sensitivity to the requirements of people in the business or potential clients. This has come from years of experience in the industry, but it has also been a conscious goal. His recounting of the story of the way these adult learnings interact with existing skills helps throw light on the issue of 'generic and transferable' skills.

Verbal communication wasn't one of the strong points in Godfrey's family when he was growing up. Neither does he believe school helped develop these skills much. He credits the adult matriculation English course as 'switching on' in him an awareness of what communication skills can mean. Later, as he moved down the paths of his working life, he began deliberately to hone these skills. He always got on very well with people, but it wasn't a focus for him to understand how people might think, or to listen, to focus on what they really were saying instead of just what their words were saying.

These days Godfrey uses his communication skills to clarify what people say to him. In the past he wouldn't have done that—'in the past' being the time before he moved into the sales and marketing area:

> I learnt an enormous amount about how businesses worked, the way people think, what makes the money, what they don't like, what they do like. So I have I believe I have a great ability in translating what business wants into something that an IT related application or system can deliver to them, which will bring benefit. I think that's the major skill I have.

For the five people in this study, the crucial communicative practices are the ones that fill their daily needs and achieve their daily purposes. In all cases, learning literate and numerate practices is described as occurring in response to needs, and in pursuit of a clear purpose and in view of the different identities required in multiple roles. The nature of their learning is intrinsically intertwined with the nature of the knowledge, skills and identities of their working adult lives.

There appears to be a permeable boundary between communicative practices associated with working and other identities for these people. Some work from home all or part of the time. All talk about work, family, leisure and other knowledge and identity resources they have, and seem to slip in and out of these identities with relative ease. None has one workplace. None has a traditional job that means 9–5 at one location, then travel home and that's it. There is explicit and widespread recognition of the importance of their multiple identities in their lives, and an explicit awareness that these identities are their life's content, rather than the skills and knowledge they might possess. Skills and knowledge are deemed important only in so far as they 'serve the purpose' of achieving the right identity on the right occasion.

Is there evidence that the identified skills are 'generic' and do transfer?

On the one hand, it seems to be intuitively evident that, if people can read and write, they can do so in a range of different contexts. It seems counterintuitive to claim that they cannot do so, and yet this appears to be the gist of the analysis in this report, for while it is possible to read and write the words in different contexts, this is in fact not what the fives cases show that effective communication practices—literacy and numeracy—really are. The next few sections will explain why.

All respondents agree that the term 'generic literacy and numeracy' could apply to the basic reading, writing and arithmetic as learned at school. However, the degree to which the participants credit these generic skills to their skills in their present lives and success is severely limited. In many cases, this school-based learning is regarded as having a negative impact on their needs and purposes for learning in adult life. Many consider these skills a 'natural aptitude'. Even the long-term unemployed youth, Jeremy, understands generic literacy and numeracy skills in terms of the basic grounding which he did not acquire at school. His post-school self-teaching efforts to learn to read and write focused on the remembered

techniques from the school-room—sounding out words and the rote copying of text to teach himself and practise 'running writing' where before he used a combination of upper and lower case printing.

Janet's most 'useful' school experience according to her was through the speech and drama course she did while at school. Clara says that she is '...a very flexible, adaptable person, I can adapt myself to many situations and I think that helps you learn the skills that you need in the different areas.' Clara says she has always been good at communicating with people and doesn't attribute school learning with this outcome. Godfrey has participated in a large number of training courses aimed at developing personal and verbal presentation skills. He feels these have helped increase his confidence and in this way they 'helped enormously'. But he believes that the courses that helped most were the ones where he had the opportunity to put his new skills into action immediately.

> I think that, if you don't use these things, they are largely lost unless you make the effort to go back and revisit all your notebooks and course notes.

Godfrey's skills development in literacy and numeracy has been an exponential process, rather than one where he simply achieved transfer of generic skills to new contexts.

Christabel places emphasis on 'communication' skills. She sees these as innate, to a certain extent. She believes she is a natural communicator. She is very self-expressive, both in words and in body. Christabel's domain-specific knowledge is heavily oriented towards dance. Her identity is closely bound up with dance, and her development of literacies connected with dance has been achieved through the medium of identity and personal growth.

Jeremy likes to write down short song lyrics which he makes up. He has therefore been able to acquire some reading and writing skills, mainly as a result of his post-school efforts to teach himself, and these skills, such as they might be, have transferred to the genre of writing lyrics. However, these skills are secondary to meeting other needs and achieving other purposes related to identity as a 'good mate', as a 'sportsman', as a rebel and even as a criminal.

What is the explanation for 'generic' and 'transferable' skills?

The nature of generic and transferable skills was not seen as a single or clear issue by the participants. They discussed generic as having a range of meanings. In Clara's case it meant 'flexibility', while many agreed that generic skills could mean reading and writing. Communicating also arose as a commonly needed generic skill, as did leadership. In other words, 'generic' meant all things to all people, and transfer of learning was only referred to as re-contextualising existing knowledge and identity through new kinds of learning.

It became difficult for the researchers to understand the nature of 'generic'—indeed it was evident that there was no such thing. However, the case studies did articulate the process of 'transferring' learning, while even that term (transfer) became less than useful for reasons soon to be explained. To the degree that Janet's 'generic skills' were perceived by her to transfer, it would seem that this occurred largely as a result of her commitment to refining them through experience, new learning and practice. It was a highly conscious process. Janet is a practical person. Her concept of the learning she engages in is a hands-on one. She is also flexible, creative, and has the confidence and self-esteem to trust her own initiative. She has a proven track record in developing site-specific competencies which she can then merge into the sort of high-level skills that make her so sought after, even beyond her own industry.

Clara believes in practice. She practises new tasks until they come 'naturally' which means until she can perform the skills and use the knowledge in the identities required of the context.

Some generic literacy and numeracy skills may be transferred in this way, but not many. She combines her practising of knowledge, skills and identities, however, with a certain amount of daring and initiative. She is unafraid of making mistakes. She acquired computer literacy, for example, largely by 'playing around with the computer'. Clara has developed site-specific knowledge, skills and identities in all her work areas, using a combination of, as she sums it up, self-confidence, initiative, adaptability, and an appetite for continued learning.

For Jeremy, the act of making up lyrics is a social and collaborative act, bringing an intimate blend of knowledge and identity resources to bear. It involves much speaking, listening, and only finally reading the lyrics the other has written and writing Jeremy's own next lines. The genre of the written lyric form is inspired by the collective knowledge and identities of the collaborators, and must follow rules of their own identities as adherents and participants in Rap music forms, precedents and procedures. The flow and measure of the words follows these forms and rules precisely and reflects the inextricable linking of knowledge and identity resources in communicative practices, as referred to above.

The issue of literacy and numeracy as learning and re-contextualising existing and new knowledge, skills and identity resources is found to be fundamental as the findings are set out in the next section.

Findings and conclusions

The previous section reported the answers to the research questions by reference to the synthesised case study data. The next section extracts and reports the findings that are drawn from the study as a whole, and discusses these findings.

Research findings

1 'Basic skills' are not transferred, they are re-contextualised by new forms of situated learning

There is little evidence that the literacy and numeracy skills of school were applicable easily or with little contextualisation to subsequent literacy and numeracy demands. That is, the participants did *not* perceive that once they had learned their literacy and numeracy skills at school, all they ever had to do was apply them with ease everywhere else. To the contrary, all participants, however easily they might have learned to read and write at school, commented in detail on the ways they had to learn and re-learn new literate and numerate practices and identities throughout their lives. They also commented that they had to practise them frequently in context or they would forget them.

None of case studies holds out any evidence that there was (or is) a basic core of skills that were or are transferred by adults when they move across different work and life contexts. As Clara expressed it:

> Certain things come easy but I still need to practise to keep them in there. I like to learn something and then practise it and practise it, and then it sort of sits in there, and then every now and again [I have to] go back over it.

This raises another crucial issue in the debate about generic skills. The issue is that, since knowledge and skills are easily forgotten, then if literacy and numeracy skills at school are only acquired freshly, if they are not applied soon and often after leaving school, they will be forgotten.

2 The terms 'generic' and 'transfer' are wrong and misleading

The longer the researchers worked with the terms 'transfer' and 'generic' as the data were analysed, the more they came to recognise that these terms were neither the right terms, nor useful in practice. They tended to obscure the reality of the literate and numerate practices of these real lives. Moreover, the misconceptions about the roles of literacy and numeracy gained at school permeated the subjects' responses, impacting in some cases on their capacity to learn literacy and numeracy that would be of use to them, as was the case with Jeremy. For example, Godfrey 'didn't get' schooling. He saw neither the purpose of it nor how it related to his 'real' life. It was not until he was 23 years of age that he saw purposes for literacy and numeracy, and how these might serve the needs of his own emerging 'working-lives'. From that time on, Godfrey learned in various work-related contexts the kinds of literacies and numeracies he needed for the various purposes he identified.

People are good at communicating from having learned to do so in a variety of contexts, *not* because they apply some other skills they have from somewhere else. Therefore, to learn to be good at it, you have to have the contexts for learning. Knowledge and skills is an important part of 'context', but so is 'identity'—being able to look and act like a worker in a particular context are intertwined. Knowing and doing are not sufficient without displaying the appropriate identity with confidence.

3 Speaking and 'personal presentation' skills are the leading communicative practices

Speaking and 'personal presentation' skills lead off as the most used and useful of the communicative practices found in the data of this project. Reading and writing provide essential support skills for working across a range of contexts, but they are support, not 'frontline' skills. Janet comments that: 'For some jobs we don't actually use a written work instruction to teach people how to do it because it's too hard'. Godfrey notes of himself at age 15, 'I didn't speak all that well…I worked hard at learning to express myself a bit more clearly'. And:

> Like any kid that left school at 15—having lived in Collingwood, which is a fairly poor suburb in Melbourne—I didn't speak all that well. I had a very broad Australian accent and dropped g's off like everyone does. I worked hard at learning to be able to express myself a bit more clearly.

Janet also finds that her speaking skills are the most important in her present working lives, but in her case, a speech course at school was the most useful and 'generic' skill she attributes to her school education. Apart from a speech and drama course, which increased her speaking confidence, she does not feel that school gave her much of use in her present work.

In all cases, speaking and personal presentation skills were seen as intrinsic aspects of 'being the right kind of person' for and in that workplace. That is, being and learning the right kind of identities demonstrated by appropriate spoken and gestural means ('personal presentation') underpins the perceived actions of 'speaking' and 'personal presentation'.

4 Successful communication is driven by the need and purpose of the learning

The evidence shows that success in learning and effective literate and numerate practices is driven and defined by the specific need and purpose *that is embedded in a specific context or setting that in turn promotes positive self-efficacy* through positive support. Self-efficacy, self-esteem and self-confidence combine with knowledge and skills and are all parts of forming the 'right' identity. The particular attributes from the person's whole repertoire of knowledge, skills and identity resources that are required for a specific communicative purpose at any one time are drawn from that repertoire *at the point of communicating*. That is, only certain, appropriate knowledge, skills and identity resources are used for any particular communicative moment. All knowledge, skills and identity resources are therefore integrated seamlessly in the moments of communicative practice.

The consequence of this seamless integration of knowledge, skills and identity resources at the 'communicative moment' is that the *absence* of any appropriate resources from the repertoire results in the overall appearance of 'illiteracy' or 'innumeracy'—even though only one small attribute may not be available. The shifting needs and purposes for communication require varying collections of the knowledge, skills and identity resources. As communicative moments extend to longer communicative episodes, then a complete communicative episode can be judged as inadequate by a succession of inadequate, though seemingly minor, resources from that larger reservoir of knowledge, skills and identity resources.

All participants defined the effectiveness of their communicative practices by reference to contextualised events that required differing knowledge, skills and identity resources, but in his succinct fashion, Jeremy, who of all the participants is the least 'motivated' literacy and numeracy learner, sums it up like this: "I did it because I wanted to and because I… I needed to do it".

5 Practice (in context) makes perfect

Part of the 'embedding' of the learning in specific contexts, as mentioned in the preceding finding, relates to the question of *practice*. Practice is mentioned frequently in the data as people report how they learned and re-learned new basic skills for their new working lives. This might seem a trite observation until it is appreciated that the practice occurs in the context in which it is acquired, and is fundamental to the individual's capacity to learn and carry out the new tasks. The implication of this for programs such as literacy and numeracy training for the unemployed are direct and strong. Since around the mid-nineties, these programs have been typically of short duration—a few weeks at best. In these short weeks, learners are supposed to make up the 'deficits' in literacy and numeracy of a lifetime while they are supposed to become 'job-ready'.

Given the importance on practising newly acquired skills and knowledge in this project's results, the implication is that such literacy and numeracy programs would need to be considerably longer, and have considerable contextualisation content if the skills acquired in their duration are expected to 'stick' and be used. Of course, practice is not restricted to a short time-frame directly after a 'course', as Godfrey notes. Of the copious number of training courses he attended in his various workplaces:

> if you don't use these things, they are largely lost unless you make the effort to go back and revisit all your notebooks and course notes.

6 The main game is good practice in learning

There is a great deal of data that talks about possible other 'generic' skills. Clara, for example, says: 'I'm a very flexible, adaptable person, I can adapt myself to many situations and I think that helps you learn the skills that you need in the different areas'. For every case, another several 'generic' skills emerge in the discussion, but none of these represents the core issue in the data as analysed. The core issue is that terms such as 'generic' and 'transferable' can include an unuseful and unusable range of impressionistic 'skills', that can include 'flexibility', 'leadership', 'good attitude', 'motivation', 'good communication skills' and a host of others. Underlying these 'generic' red-herrings is the fundamental need to foster and resource *good practice in learning*.

Good practice in learning as evidenced through this project means a combination of formal, and informal opportunities being available for people to fulfill an identified need. Once the need is identified, they can bring their relevant knowledge and identity resources together in pursuit of a clearly identified and common purpose. As learners work through these opportunities in fulfillment of their need and in pursuit of their purpose, they, and those who might be there to facilitate their learning, can readily identify any specific gaps in their knowledge and identity resources and these can be the subject of new learning aimed at achieving the purpose.

Conclusion

The five people, or cases, who have been the subject of this study are simply that—five instances of people whose un/employment lives seem to closely approximate what the literature suggests might be 'non-standard employment' in these new times. No attempt can be made to generalise from these five cases, since the purpose of the cases has been to explain, expand, clarify and develop meanings and theory about the issue of effective communicative practices in new times.

The five cases in the study have shown up some apparently counterintuitive information about the value and uses of 'basic literacy skills'. For a start, effective communicative interaction is never seen as the product of just a single skill or just one piece of knowledge. Effective communication in this study is found to be is the effective integration of knowledge, skills and identity resources *as they apply to the purpose in hand.* Being good at reading and writing, for example, is no measure of being a good computer operator, neurosurgeon, business person or hairdresser.

Second, the study indicates that the terms 'generic' and 'transferable' as applied to skills are inaccurate and misleading. Particular skills as such are not transferred. Rather, selected knowledge, skills and identity resources from a person's vast repertoire of resources are brought into use at moments of communication that lead to communicative episodes or events. Reading, writing and numeracy are part of this repertoire, but this in itself does not constitute effectiveness of communicative practices. Each communicative event is uniquely purposeful and has unique contextual variable that combine in such a way that it is *the unique configuration* of appropriate knowledge, skills and identity resources that forms 'the effective communicative practices' at any one time in any one context.

Finally, the study suggests that in society's quest for a silver bullet—the generic competencies that will solve all problems—effective communication in a variety of different settings requires constant learning and re-learning. The focus therefore should be *not* on 'generic' skills and how they may or may not 'transfer'. Similarly it would be missing the point to suggest that workforce skills issues will all be addressed if industry were to hire people with the 'right' generic skills, since the 'right' skill mix is invariable different in each and every communicative event.

Rather, the study suggests that the priority should be effective *learning*. The steps in an effective learning process that works in different contexts are first, to establish the *need* for learning; second, to negotiate a common *purpose* for the projected activities; third, to design the necessary quality and quantity of *opportunities* for the learning events—formal and informal; fourth, to *embed knowledge, skills and identity* resource development strictly in achieving that purpose; fifth, to embed the learning as far as possible in meaningful *contexts*; sixth and finally, to *evaluate* (as the five people in the five case studies do in this report) and *celebrate* the achievement of the purpose and the redefinition of further learning goals.

As one respondent puts it, 'If I know *why*, I only have to learn something once'.

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Appendix A

Interview Schedule

The general aim of the data collection for this project is to get as in-depth a picture of this person's whole working life as possible – what *really* makes them tick as an operator? Interviews should be as informal in tone as possible.

Interview questions: Knowledge, skills and identity

General

1. What personal attributes (skills, knowledge, values, networks etc) do you consider your *most* important ones for managing your work life?
2. Tell the story of how you managed when you began a new job or the new phase of a job (e.g., when you started work from home for the same employer, when you expanded your business, began a new job, added another job to your existing repertoire, etc).
3. Think of a crisis in your work life (being fired, looking for new job, changing roles, promotion etc). Tell me about the time, the context, the coping strategies, what got you through it, what impeded you.
4. What is the relationship between your work and your outside-work life? Do you use knowledge, skills and your 'different hats' across these different domains of life? *(Contextualise for each.)*
5. When you are starting a typical day's activities, how do you 'prime' yourself – prepare yourself for the day's activities, psych yourself up?
6. What kind of networks do you have that help with your work and the way you work?
7. Think of some times when **networks** have helped you and describe those times.
8. What do you value most in your attitudes to work?
9. What is most important to you in your relationships with you work colleagues?
10. What is it about you and your attitudes that helps facilitate your relationships with your work colleagues best?
11. What about your colleagues' attitudes and skills helps facilitate your relationships with your work and your colleagues best?
12. What role does **trust** play in your relationships with your employers and colleagues? Think of some times when trust has been important, and tell the story about those times.
13. What are the most important **values** to you that you believe underpin your success in work, home and community activities?

Contexts of work

14. What is your work, and what different aspects of it are there?
15. Tell the story of the steps and tasks you go through when you start a workday.
16. What contexts (physical locations) do you carry out different aspects/parts/time sequences in? Describe them.
17. What do you value most about the physical resources of your work place/s?
18. What do you value most about the 'people side' of your work place/s?
19. Overall, what is the most important thing you value about your work place/s?
20. Changing 'hats': Working identities
21. Most people consider they have a particular 'identity' – it's the way they 'are', their image. It is often considered important to behave in (slightly? significantly?) different ways from one situation to another – this is often called 'behaving appropriately'. For

example, we dress and act differently with our employer from the way we behave with our friends or colleagues. Think of the different situations you work in: In general, how do you view yourself as a 'working person'? That is, what kind of image do you feel you project to those around you? Do you project yourself differently from one work situation to another?

22. When you are thinking about going from one kind of work to another, what goes through your head? What things do you have to 'prime' yourself about? What tasks do you have to get in your mind? What do you do about 'changing hats'?
23. Are there differences in the way you dress when going from one kind of work to another, or one workplace to another (working from home, different employers etc)? Describe them.
24. Are there differences in the way you act/behave/manner when going from one kind of work to another, or one workplace to another (working from home, different employers etc)? Describe them.
25. Describe a typical day's routine in your life.
26. Enlarge on the day to describe a week's typical pattern.
27. Is there a typical 'work cycle in your life? That is, are there certain sets of events that follow some kind of pattern (e.g., working for different jobs on different days of the weeks, apportioning your work day into blocks of hours etc). Do your work cycles span more than a week? If so, describe this cycle.
28. What values have you had to change to manage your new ways of working?

Prose, Document and Quantitative literacy

29. In general, what reading, writing and numerical skills stand you best stead in all your work situations? Describe how and where you use a couple of these skills.
30. Think of an event which represented you at your 'working best'. Tell that story. Focus on the tasks that you did, describing them, and any written, spoken and numerical bits of them.
31. What writing tasks do you carry out regularly? (Maybe categorise these into informal work emails, reports, letters, etc) Frequency of these over, say, a week?
32. What reading tasks do you do you carry out regularly? (Maybe categorise these into informal work phone calls or conversations, verbal reports, talk over the photocopier, etc.) Frequency of these over, say, a week?
33. What numerical tasks do you carry our over a week? (Maybe categorise these into informal work tasks (written or spoken) or conversations about e.g., budgets, prices, buying things, banking, verbal reports, talk in tearoom, etc.) Frequency of these over, say, a week?
34. Thinking of writing, speaking and numerical tasks, think of a time when you move between jobs or job aspects. List all the writing, spoken and numeracy tasks involved as you move from one job task to another.
35. Ask subject to show you how they attend to a work task while you are there (e.g., email, phone call). Record and observe these moves closely.
36. Then ask subject to change tasks to something related to their other job/s. Record and observe, and prompt with e.g., 'What are you thinking of now? What tasks do you have to do here? Why are you doing this?

Observations

Interviews outside the interview observations

37. Where there is a choice, interview subjects at their workstations. Explain that this is an important part of the research, as we are noting how they operate in this environment.

If more than one workplace, try and do subsequent interviews in different contexts. Stress that the interviewing should occur *around* their normal work, e.g., phone calls, emails etc. If they have time off work for the interviews, fine.

38. Observe subject while interviewing and make notes of how they operate while talking to you. Look for their eye movements – do they watch for emails coming through, body stance (indicating alertness), sundry literacy and numeracy activities not part of interview (especially phone calls – how do they do this? Tone, degree of formality etc.).

Outside observations

39. If possible, arrange a time to be with subject in (a) workplace/s, (b) in car in transit to work appointments, (c) whenever the subject is moving from one context or task to another.

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